VR674CAT

Video Cassette Recorder

Owner's Manual

VCR plus+ Easy Taping.

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What's more, your purchase guarantees you'll receive all the information and special offers for which you qualify, plus easy access to accessories from our convenient home shopping network.

And most importantly you can count on our uncompromising commitment to your total satisfaction.

All of this is our way of saying welcome-and thanks for investing in a PHILIPS product.

Sincerely,

Robert Minkhorst
President and Chief Executive Officer

P.S. Remember, to get the most from your PHILIPS product, you must return your Warranty Registration Card within 10 days. So please mail it to us right now!

Know these **safety** *symbols*

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

⚡ This "bolt of lightning" indicates uninsulated material within your unit may cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.

! The "exclamation point" calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour éviter les choc électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

For Customer Use

Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.

Model No. _____
Serial No. _____

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Welcome to your VCR owner's manual.

This manual has seven sections: Setting Up Your VCR; Description of Controls; Basic Operations; Recording Options; Playing Options; Additional Features; and Information You May Need. The instructions explain all of the VCR's features, which are listed below. You cannot hurt your VCR by trying the features! So read on – and relax.

Features

- Auto DBS RecordLink™
- Automatic Channel Setup
- Automatic Clock Setting with Time Zone
- Automatic Head Cleaner
- Automatic Operation Features
- Automatic Tracking Adjustment
- Blue Background
- Child Lock
- Daylight-Savings Time
- Display Panel with Auto Dimmer
- Front Panel Menu Access
- Hi-Fi Stereo Sound System
- High Quality (HQ) System
- Multi-Channel Television Sound (MTS) System
- 19 micron head - Improves the picture quality of tapes recorded in SLP
- On-Screen Displays in English or Spanish
- One-Touch Recording
- Real-Time Counter
- Remote Control with lighted buttons and the capability to operate a TV, Cable Box, and Direct Broadcast System
- Repeat Play
- S-VHS Quasi Play Back (SQPB)
- Search Functions: Time Search; Index Search; Record End Search; Skip Search
- ShowGuard™ - Indefinite Timer Recording memory
- Smart Picture™
- Special Effects Playback: Forward and Reverse Searching; Still; Variable Slow; Frame Advance
- The VCR Plus+ Programming System

Safety Precautions

Warning: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

Federal Communications Commission Warning: Any unauthorized changes or modifications to this equipment void the user's authority to operate it.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This VCR has a High Quality (HQ) system and is compatible with existing Video Home System (VHS) equipment.

Note to the Cable TV System Installer: This reminder calls the Cable TV system installer's attention to Article 820-40 of the National Electrical Code, which provides guidelines for proper grounding – in particular, specifying that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as possible.

Declaration of Conformity

Model Number:	VR674CAT
Trade Name:	Philips
Responsible Party:	Philips Consumer Electronics P.O. Box 14810 Knoxville, TN 37914-1810 (865) 521-4316

As an ENERGY STAR® Partner, Philips Consumer Electronics has determined that this product meets the ENERGY STAR® guidelines for energy efficiency. ENERGY STAR® is a U.S. registered mark. Using products with the ENERGY STAR® label can save energy. Saving energy reduces air pollution and lowers utility bills.

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VCR Plus+® and PlusCode® are registered trademarks of Gemstar Development Corporation. The VCR Plus+ Programming system is manufactured under license from Gemstar Development Corporation.

Helpful Hint

- *Your new product, its packaging, and this manual contain materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and to minimize the amount that needs to be properly disposed.*
  Your product uses batteries that should not be thrown away when depleted but should be disposed of as small chemical waste.
  Please find out about the local regulations on disposal of your old product, batteries, manual, and packaging whenever you replace existing equipment.

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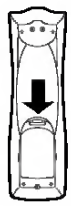
Removing the Plastic Cover from the Front Panel

A thin, plastic cover may protect the front panel of your VCR. Before using the VCR, lift a corner of the plastic, then peel it off.

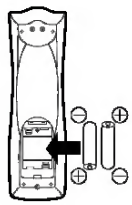


1

Putting Batteries in the Remote Control

1

Remove the battery compartment lid on the bottom of the remote control by pressing the tab, then lifting the lid.



2

2

Place two AA batteries inside the battery compartment with their + and – ends aligned as indicated.

3

Replace the battery compartment lid.

3

Battery Safety

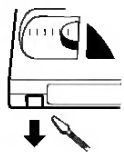
- Battery Usage CAUTION - To prevent battery leakage that may result in bodily injury or damage to the unit:
  Install ALL batteries correctly, with the + and - markings on the battery aligned as indicated on the unit;
  Do not mix batteries, for example, old with new or carbon with alkaline; and
  Remove batteries when the unit will not be used for a long time.

Using the Remote Control

- Point the remote control at the VCR, then press the VCR button before using the remote control to operate the VCR.
- Point the remote control at the TV, then press the TV button before using the remote control to operate the TV.
- Point the remote control at the Cable Box or Direct Broadcast System (DBS), then press the CBL/DBS button before using the remote control to operate the Cable Box or DBS.

Recording Prevention

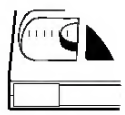
Video cassette tapes have record tabs to ensure you do not accidentally erase recordings.



1

1

To prevent recording, break off the tab with a screwdriver.



2

2

To allow recording, cover the hole with cellophane tape.

VCR maintenance

- Use only tapes with the VHS mark. The use of other tapes may result in poor picture quality and excessive deposits on the video heads, which the warranty may not cover if damage occurs.
- Remove any light adhesive stick-on notes from the video cassette tape before putting the tape in the VCR. Removable labels can jam the VCR.
- The VCR requires periodic maintenance to maintain its excellent performance. This VCR has an Automatic Head Cleaner. However, you may have to replace the video heads eventually. Only an authorized service center should perform this service.

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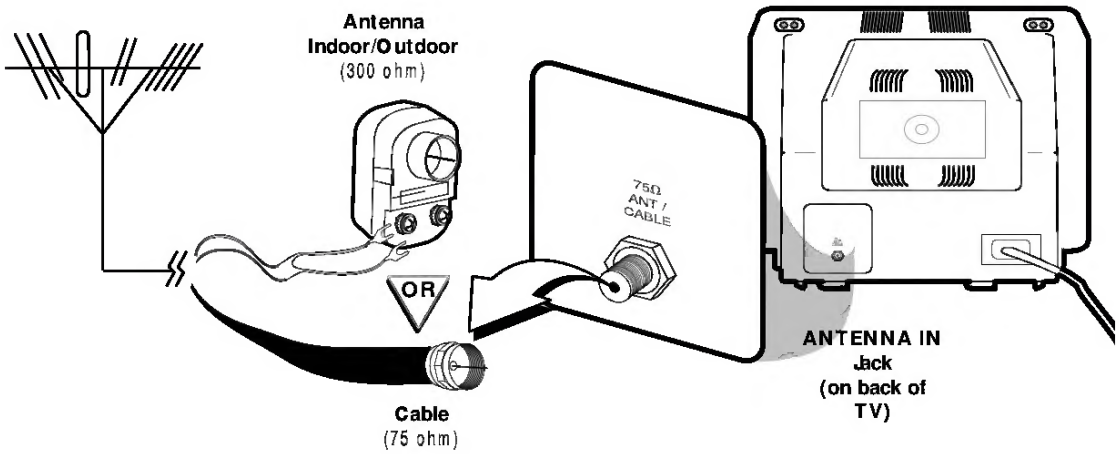
6 Hookups Without a Cable Box/Direct Broadcast System

The basic VCR/TV connection – antenna/cable to VCR to TV – is shown below. If you have a Cable Box or a Direct Broadcast System, please see pages eight-nine. If you have a Stereo TV, please see page 10. After you hook up the VCR, go to page 11 to turn on the VCR.

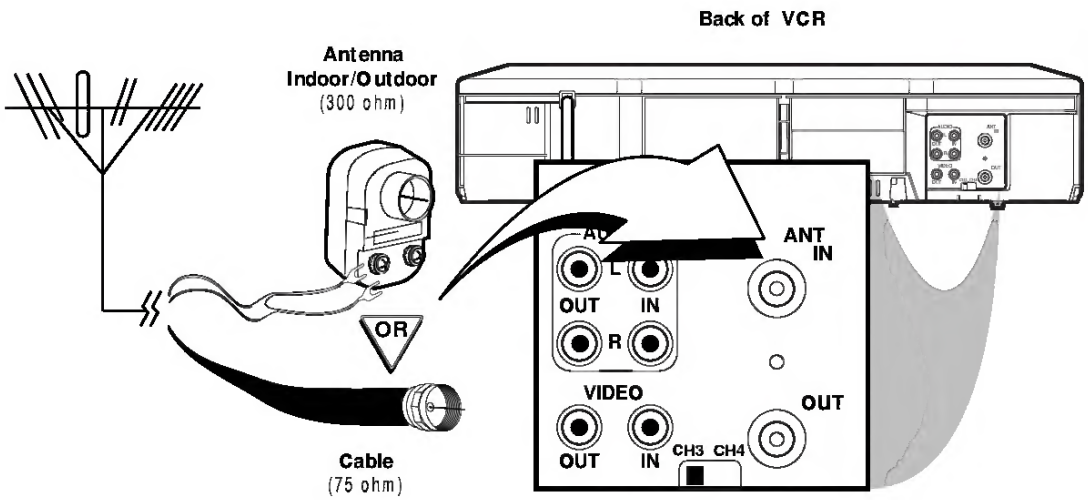
1

Disconnect the antenna or cable from your TV.



2

Connect the antenna or cable to the ANT(enna) IN Jack of your VCR.



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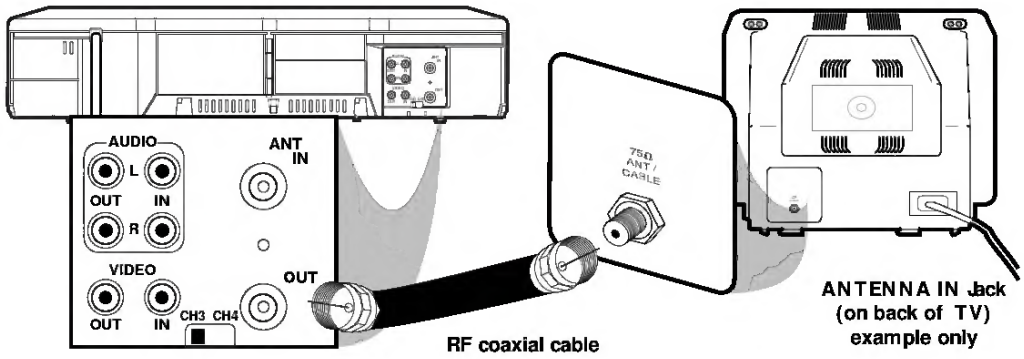
3

Connect the supplied black RF coaxial cable to the OUT Jack on the back of the VCR and to the ANTENNA IN Jack on the TV. (You may use either a snap-on type (supplied) or screw-on type of coaxial cable, whichever you prefer.)

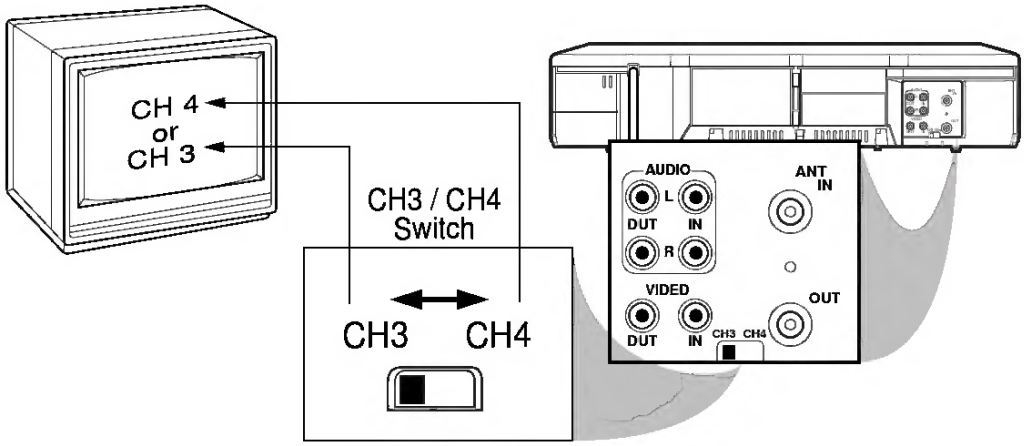


4

Plug in the power cords of the TV and the VCR.

5

Set the CH3/CH4 switch on the back of the VCR to CH3 or CH4, whichever channel is not used or least used in your area. **Set the TV to the same channel.** For example, when playing a tape, if the CH3/CH4 switch is set to CH3, the TV should be on channel 03.



6

You are ready to turn on the VCR. Please go to page 11 before turning on the VCR.

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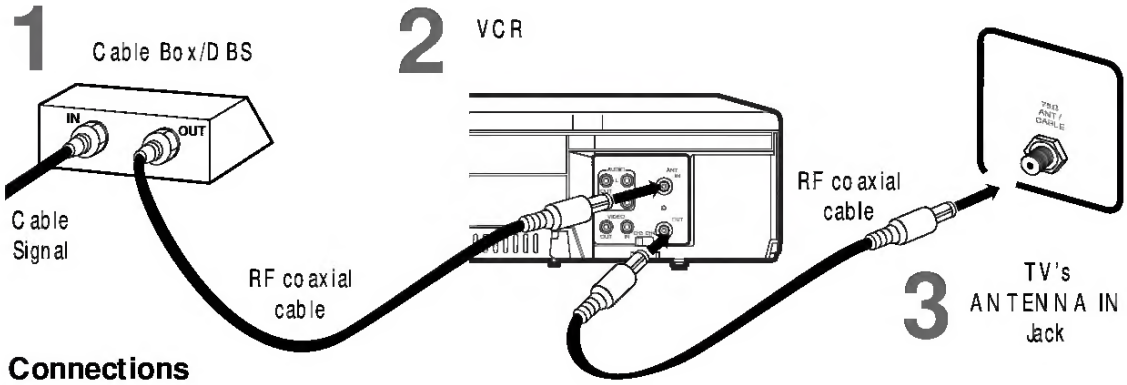
8 Hookups With a Cable Box/Direct Broadcast System

There are two ways to connect your Cable Box/DBS to the VCR. With this connection:

- You may view any channel.
- You must select channels at the Cable Box/DBS. You can not change channels at the VCR.
- You may not view a channel other than the one you are recording.
- You may not program channels at the VCR.
- You can only program a timer recording for one channel at a time. Set the TV and the VCR to the Cable Box/DBS output channel (channel 03 or 04). Set the VCR's CH3/CH4 switch to the same channel. Set your Cable Box/DBS to the channel you want to record. When you enter the channel you want to record in a timer recording, select channel 03 or 04 (the Cable Box/DBS output channel). (This is step 5 on page 35.) Leave the Cable Box/DBS on for a timer recording.
- If you use the VCR Plus+ Programming system, set the Cable/TV channel to 3 or 4 (Cable Box/DBS output channel) for every VCR Plus+ channel in the VCR Plus+ Cross Reference Map. You must set the Cable Box/DBS to the channel you want to record; leave the Cable Box/DBS on for the timer recording. *Details are on page 39.*



Connections

1

Connect a Cable signal to the IN Jack on the Cable Box/DBS.

2

Use the supplied black RF coaxial cable to connect the OUT Jack on the Cable Box/DBS to the ANT(enna) IN Jack on the VCR.

3

Use a second RF coaxial cable (not supplied) to connect the OUT Jack on the VCR to the TV's ANTENNA IN Jack.

Recording/Viewing Any Channel

1

With the VCR on and in VCR position (the VCR light will appear on the display panel), **use the CH(annel) ▲/▼ buttons to set the VCR to the Cable Box/DBS output channel (channel 03 or 04). Set the CH3/CH4 switch on the back of the VCR to the same channel.**

2

Set the TV to the same channel to which you set the VCR.

3

Select the channel you want to view/record at the Cable Box/DBS.

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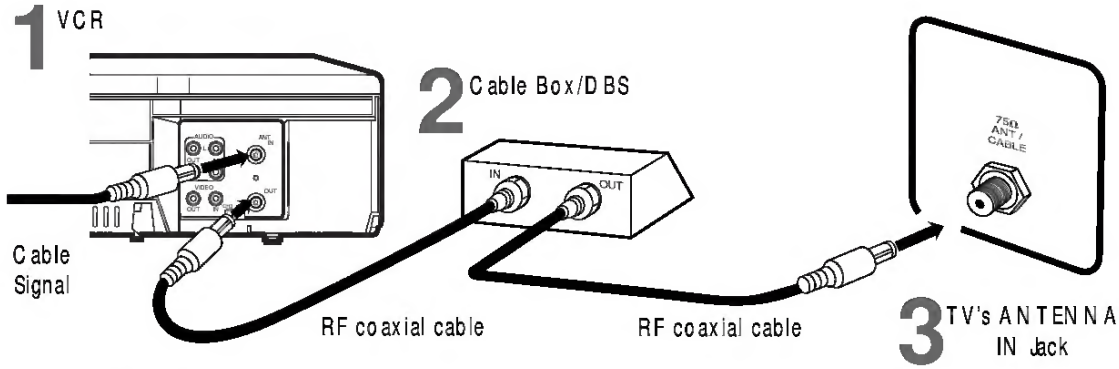
With this connection:

- You may watch one channel while recording another.
- You may not record scrambled channels.



Connections

1

Connect a Cable signal to the VCR's ANT(enna) IN Jack.

2

Use the supplied black RF coaxial cable to connect the OUT Jack on the VCR to the IN Jack on the Cable Box/DBS.

3

Use a second RF coaxial cable (not supplied) to connect the OUT Jack on the Cable Box/DBS to the ANTENNA IN Jack on the TV.

Recording One Channel/Watching Another

1

Put the Cable Box/DBS on the same channel as the VCR's CH3/CH4 switch. Set the TV to the Cable Box/DBS output channel (03 or 04).
Then, with the VCR in VCR position (the VCR light will appear on the display panel), **use the CH(annel) ▲/▼ buttons to select the channel you want to record at the VCR. Start the recording.**

2

Press the VCR/TV button once to put the VCR in TV position. (The VCR light will disappear.)

3

Select the channel you want to watch at the Cable Box/DBS.

Helpful Hint

- *When you play a tape, make sure the Cable Box/DBS is set to the same channel as the CH3/CH4 switch on the VCR. Set the TV to the Cable Box/DBS output channel (03 or 04).*

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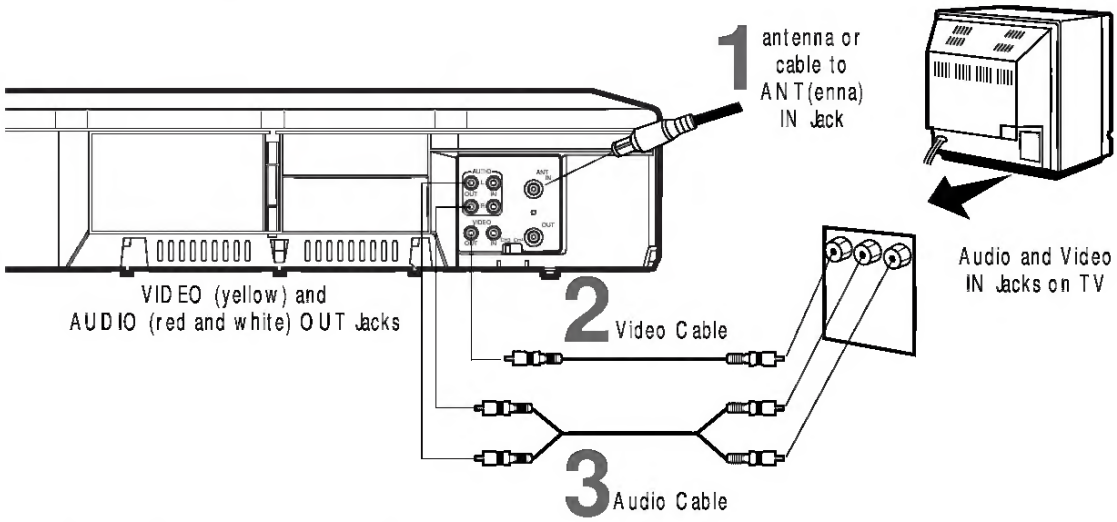
10 Hookups With a Stereo TV



- Audio and Video cables are not supplied.

1

Connect the antenna or cable to the ANT(enna) IN Jack on the back of the VCR.

2

Connect a video cable to the yellow VIDEO OUT Jack on the back of the VCR. Then, connect the other end of the video cable to the VIDEO IN Jack on your TV.

3

Connect an audio cable to the red and white AUDIO OUT Jacks on the back of the VCR. Then, connect the other end of the audio cable to the AUDIO IN Jacks on your TV.

4

Turn on your TV, making sure it is in Line Input mode. This might be referred to as the TV's Audio/Video In channel or the Auxiliary In channel. Please refer to your TV owner's manual for details.

Helpful Hint

- *A stereo audio cable (not supplied) is used here to deliver audio to the TV's left and right channels.*

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Before turning on your VCR, make sure batteries are in the remote control and you have connected the VCR and TV correctly.

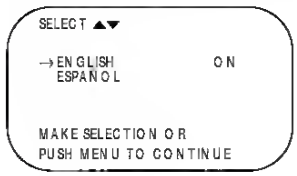
- Follow the steps on this page only when you plug the VCR power cord into the wall outlet for the first time.
- You can not program channels if you are using a Cable Box or a Direct Broadcast System.
- If you are not using a Cable Box/DBS, the VCR clock may set itself automatically after you connect the antenna/Cable signal to the VCR and plug in the power cord. The time will appear on the display panel.

1

Press the VCR button, then press the POWER button. The VCR light and the PWR (power) light will appear on the VCR display panel.

2

Turn on the TV. Set it to the same channel as the CH3/CH4 switch on the back of the VCR. The display shown below will appear on the TV screen. (If the display does not appear, check your hookups. Then follow the steps on page 12 to set up channels and page 15 to select a language.)

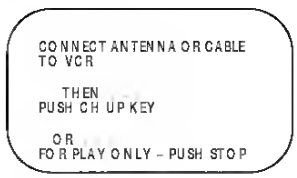


3

Within 60 seconds, press the PLAY/▲ button or the STOP/▼ button to select English or Spanish on-screen displays and menus.

4

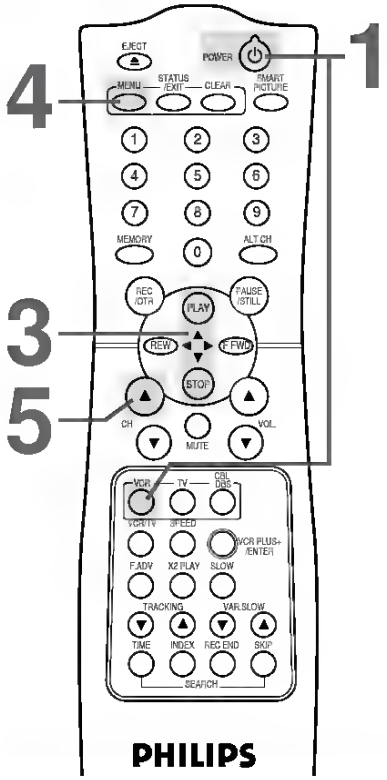
Press the MENU button. The display shown below will appear.



5

Within 60 seconds, press the CH(annel) ▲ button to begin automatic channel programming. AUTO CH PROGRAMMING IN PROCESS PLEASE WAIT will appear on the screen. The VCR will memorize all available channels. The channel numbers will appear on the display panel as the VCR scans channels. When all channels are memorized, CHANNELS ARE SET will appear on the screen briefly, then TV programming will appear.
Now, when you press the CH(annel) ▲/▼ buttons, you'll only scan through channels that you receive. You can still select other channels using the Number buttons.

2 Turn on the TV.



Helpful Hints

- *To skip this feature and play a tape immediately, insert a tape with its record tab removed. Or, to skip step 3, press the MENU button. All on-screen displays and menus will be in English. To skip step 5, press the STOP/▼ button. Channels will not be memorized, and CHANNELS NOT SET will appear on the screen.*
- *When you turn on the VCR again later, you may see a message regarding AUTO CLOCK. Details are on pages 16-19.*
- *If you try to program channels when there is no antenna or cable connected to the VCR, programming will appear to take place, but eventually a NO TV SIGNALS message will appear. Connect an antenna or cable to the VCR's ANT(enna) IN Jack and press the CH(annel) ▲ button again. You may need to follow the steps on page 12.*

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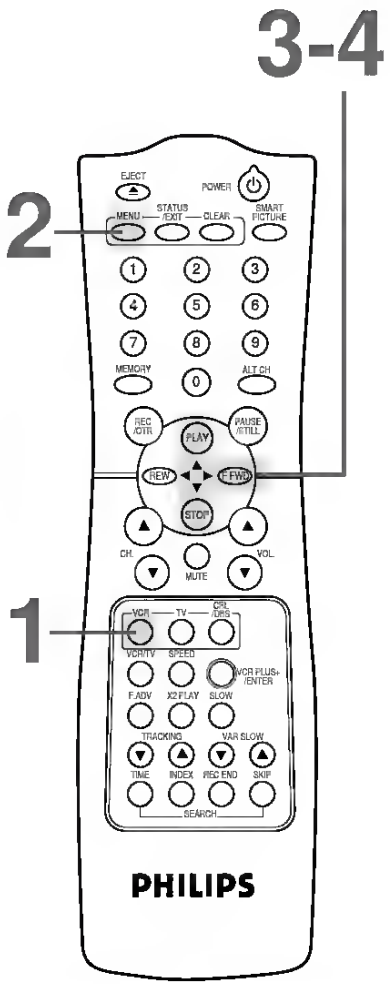
12 Automatic Channel Setup

Although your VCR may automatically memorize the channels you receive when you turn it on for the first time, this function lets you set up the channels again.



1

Press the VCR button.

2

Press the MENU button.

```
SELECT ▲▼ CHOOSE ►
  →PROGRAM
   VCR SET UP
   TUNER SET UP
   SET CLOCK
   AUTO DBS          OFF
     RECORD LINK

TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select TUNER SET UP, then press the F.FW D/► button.

```
SELECT ▲▼ CHOOSE ►
  →AUTO PROGRAMMING
   ADD/DELETE CH
   CH MEMORY REVIEW
   TV STEREO          ON
   2ND AUDIO

TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select AUTO PROGRAMMING, then press the F.FW D/► button. The VCR distinguishes between TV channels and cable channels, and the VCR will memorize all the channels you receive. The channel numbers will appear on the VCR display panel during channel setup.

```
AUTO CH PROGRAMMING
      IN PROCESS
     PLEASE WAIT


START          FINISH
```

5

Wait for a few minutes while the VCR sets up the channels. When this is complete, CHANNELS ARE SET will appear on the screen. Then the programming of the lowest channel number placed in the VCR's memory will appear on the screen. Now when you press the CH(annel) ▲/▼ buttons, you will scan only through channels you receive. You may still select non-memorized channels by pressing the Number buttons.

Helpful Hints

- *You can not enter the TUNER SET UP menu when you are in Line Input mode (channel 001 or 002). When you select channel 001 or 002, AV REAR or AV FRONT will appear on the TV screen briefly.*
- *You can not program channels if you are using a Cable Box or DBS.*
- *If you have an antenna, channels 2-69 will be available. If you have a cable connection, channels 1-125 will be available.*

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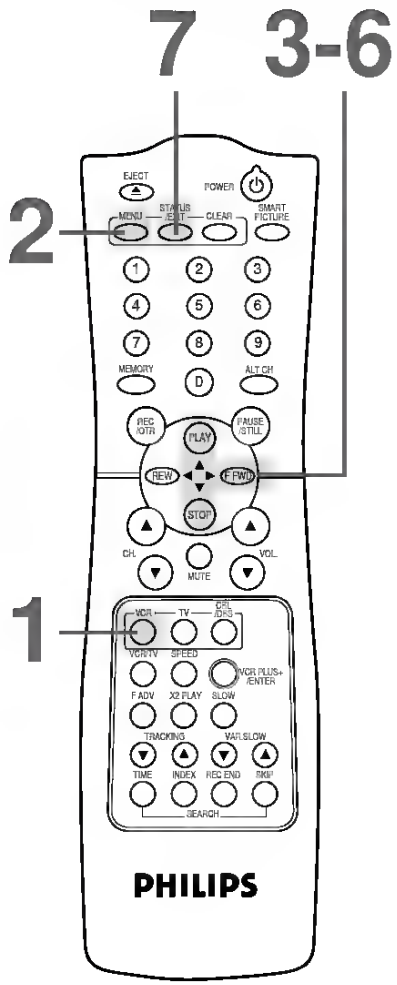
Adding/Deleting Channels

If your channel lineup changes, you may want to add newly available channels or remove channels that are no longer available in your area. You can use the CH(annel) ▲/▼ buttons to scroll through only the available channels.

To add or delete channels from the VCR's memory, follow these steps.



1

Press the VCR button.

2

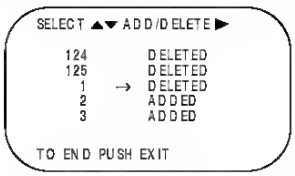
Press the MENU button.

3

Press the PLAY/▲ button or the STOP/▼ button to select TUNER SET UP, then press the F.FWD/▶ button.

4

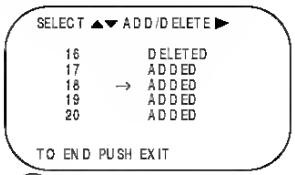
Press the PLAY/▲ button or the STOP/▼ button to select ADD/DELETE CH, then press the F.FWD/▶ button.



NOTE. If you have an antenna, channel numbers 2-69 will appear on the ADD/DELETE CH menu. If you have a cable connection, channels 1-125 will be available.

5

Press the PLAY/▲ button or the STOP/▼ button until the channel number you want to add or delete appears beside the arrow.



6

Press the F.FWD/▶ button to select ADDED or DELETED. Repeat steps 5 and 6 until you have added or deleted all the channels you wanted to add or delete.

7

Press the STATUS/EXIT button.

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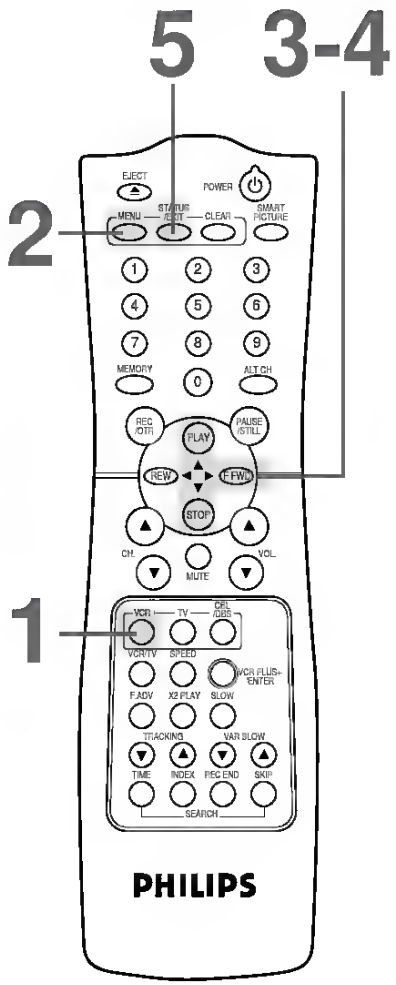
Reviewing Memorized Channels

Follow these steps to see which channels are available at the VCR. These channels will be available when you use the CH(annel) ▲/▼ buttons.



1

Press the VCR button.

2

Press the MENU button.

```
SELECT ▲▼ CHOOSE ►
   →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS        OFF
      RECORD LINK

TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select TUNER SET UP, then press the F.FWD/► button.

```
SELECT ▲▼ CHOOSE ►
   → AUTO PROGRAMMING
     ADD/DELETE CH
     CH MEMORY REVIEW
     TV STEREO          ON
     2ND AUDIO


TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select CH MEMORY REVIEW, then press the F.FWD/► button.

A list of programmed channels will appear on the screen.

- If all the programmed channels don't fit on the screen, press the F.FWD/► button to see the remaining channels. Then press the REW (ind)/◄ button to return to the first screen of channels.
- If you do not press any buttons within 10 seconds, you will either go to the next screen of channels or you will return to the previous menu.

5

Press the STATUS/EXIT button once or twice to exit.

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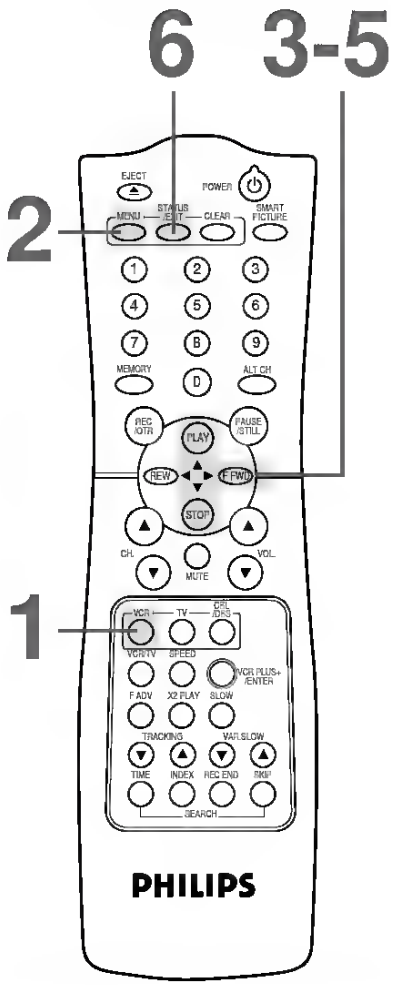
Follow these steps to change the language of the on-screen displays and menus.



1

Press the VCR button.

2

Press the MENU button.

```
SELECT ▲▼ CHOOSE ▶
   →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS          OFF
    RECORD LINK
TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select VCR SET UP, then press the F.FW D/▶ button.

```
SELECT ▲▼ CHOOSE ▶
   → REPEAT PLAY          OFF
     ON SCREEN MODE
     AUDIO OUT
     LANGUAGE
     VCR PLUS+ REF. MAP
     BLUE BACKGROUND      ON
TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select LANGUAGE, then press the F.FW D/▶ button.

```
SELECT ▲▼

   → ENGLISH              ON
     ESPANOL

MAKE SELECTION OR
TO END PUSH EXIT
```

5

Press the PLAY/▲ button or the STOP/▼ button to select English or Spanish on-screen displays and menus.

6

Press the STATUS/EXIT button.

Helpful Hint

- *If you accidentally select Spanish and need English.*

1. *Press the VCR button.*
2. *Press the MENU button.*
3. *Press the PLAY/▲ button or the STOP/▼ button to select PREPARE EL VCR, then press the F.FW D/▶ button.*
4. *Press the PLAY/▲ button or the STOP/▼ button to select LENGUAJE, then press the F.FW D/▶ button.*
5. *Press the PLAY/▲ button or the STOP/▼ button to select ENGLISH.*
6. *Press the STATUS/EXIT button.*

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16 Setting the Clock

There are two ways to set the clock. With manual clock setting, you tell the VCR the current time. With automatic clock setting, the VCR gets the current time from a PBS station. It keeps track of the time by constantly referring to the time the PBS station broadcasts.

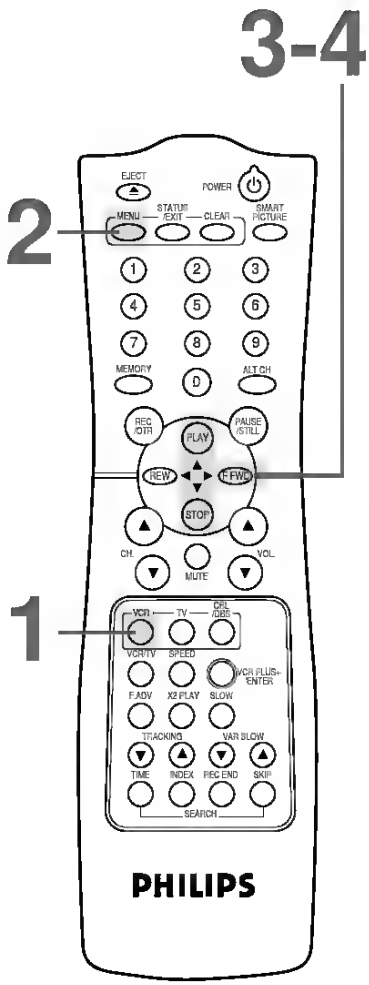
If you are using a Cable Box or Direct Broadcast System, you must set the clock manually.

Follow the instructions under either manual clock setting (below) or automatic clock setting (page 18) to set the VCR's clock. If you use AUTO CLOCK, follow the steps on page 19 to have the VCR maintain the clock according to your Time Zone. The channel that supplies the time might broadcast from a different time zone. So, select your Time Zone to ensure the clock is correct.

Before you begin, make sure:

- The VCR is hooked up and turned on, and channels are programmed into the VCR's memory (see pages six-12).
- The VCR is in VCR position. The VCR light will appear on the display panel. If it does not, press the VCR/TV button once.

Do each step within 60 seconds of the previous step.



Manual Clock Setting

1

Press the VCR button.

2

Press the MENU button.

```
SELECT ▲▼ CHOOSE ▶
   →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS       OFF
      RECORD LINK
TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select SET CLOCK, then press the F.FWD/▶ button.

```
          SET CLOCK
→AUTO CLOCK          [ON]
  SET MANUAL CLOCK
  DAYLIGHT SVG TIME  [ON]
  SET TIME ZONE
    (AUTO)
TO CONTINUE PUSH MENU
SELECT ▲▼ CHOOSE ▶
TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select SET MANUAL CLOCK, then press the F.FWD/▶ button.

```
TIME - - : - -
DATE - - / - - / - -
TO END PUSH EXIT
```

Helpful Hints

- *To display the time on the TV screen, press the STATUS/EXIT button. Details are on page 26.*
- *The VCR may lose the clock setting if the power fails.*
- *Until the clock is set, - - : - - may appear on the VCR display panel.*

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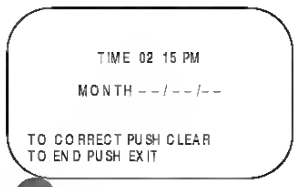
5

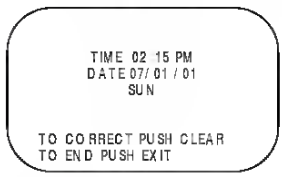
Press two Number buttons for the hour(s) and two Number buttons for the minute(s). Then press 1 for AM or 2 for PM. For example, for 2:15 PM, press 02, 15, 2.

- Enter a 0 before a single-digit number.
- Entries that do not match the VCR's calendar or clock will cause a question mark (?) to appear on the screen.
- To make corrections, press the CLEAR button until the space for the number you want to correct is flashing. Then enter the correct number.



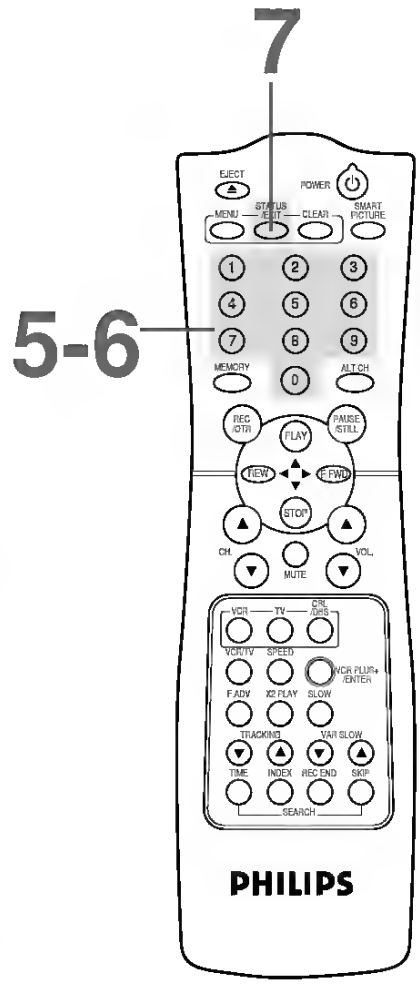
6

Press two Number buttons for the month, two Number buttons for the day, and two Number buttons for the year. For example, for July 1, 2001, press 07, 01, 01. The day of the week will appear automatically.



7

Press the STATUS/EXIT button to start the clock. The screen will return to the program you were watching. The time will appear on the VCR display panel.



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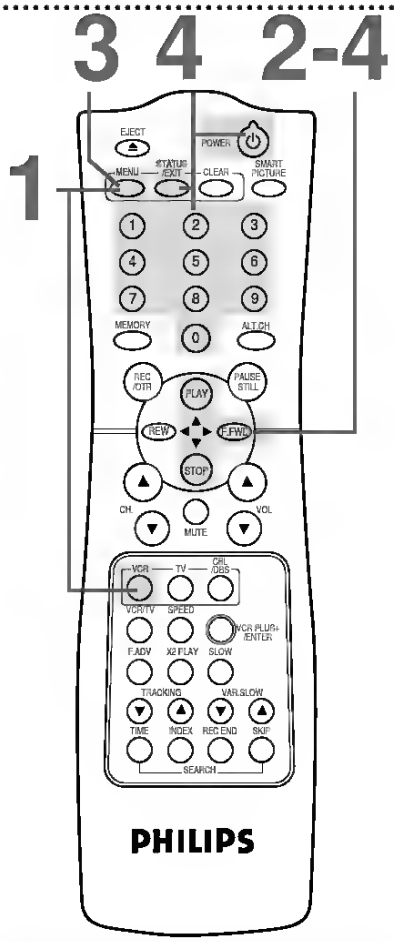
Automatic Clock Setting



1

Press the VCR button, then press the MENU button.

```
SELECT ▲▼ CHOOSE ►
   →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS      OFF
    RECORD LINK

TO END PUSH EXIT
```

2

Press the PLAY/▲ button or the STOP/▼ button to select SET CLOCK, then press the F.FWD/► button.

3

AUTO CLOCK will be selected. **If OFF appears to the right of AUTO CLOCK, press the F.FWD/► button to select ON. Then, press the MENU button. Or, if ON appears to the right of AUTO CLOCK, press the MENU button.**

```
          AUTO CLOCK

    AUTO CLOCK USES
    PBS CHANNEL DATA
  →SET PBS CH  AUTO
    SET PBS CH  MANUAL


SELECT ▲▼ CHOOSE ►
TO END PUSH EXIT
```

4

- **If you want the VCR to locate a PBS station from which to take the time, press the PLAY/▲ button or the STOP/▼ button to select SET PBS CH. AUTO. Then press the F.FWD/► button.** When the current time appears on the screen, press the STATUS/EXIT button. Or, you may be prompted to turn off the VCR. Turn off the VCR power, and leave it off for several minutes. When the current time appears on the VCR display panel, the clock is set. Turn on the VCR again.
- **If you want to tell the VCR the PBS station from which to take the time, press the PLAY/▲ button or the STOP/▼ button to select SET PBS CH. MANUAL. Press the F.FWD/► button, then use the Number buttons to enter the channel number of the desired PBS station.** When the current time appears on the screen, press the STATUS/EXIT button.

  NOTE: CANNOT FIND PBS CLOCK DATA may flash on the screen. Press the PLAY/▲ button or the STOP/▼ button to choose SELECT NEW PBS CH., then press the F.FWD/► button. Use the Number buttons to enter the channel number of another PBS station.

  Or, press the PLAY/▲ button or the STOP/▼ button to select SET PBS CH. AUTO. Press the F.FWD/► button. You will be prompted to turn off the VCR. Turn off the VCR power, and leave it off for several minutes. When the current time appears on the VCR display panel, the clock is set. You may turn on the VCR again.

5

Follow the steps on page 19 to select your time zone.

Helpful Hints

- *If you enter an incorrect PBS channel number at step 4, press the CLEAR button, then enter the correct channel number.*
- *If you have an antenna, you may select channels 2-69 at step 4. If you have a cable connection, you may select channels 1-125.*
- *The VCR can not set its clock automatically if it doesn't receive a channel that carries a time signal. Set the clock manually.*
- *If only a few channels in your area carry time signals, setting the clock automatically may take several minutes. If nothing happens after you wait several minutes, set the clock manually.*
- *You cannot select AUTO CLOCK at step 3 during tape playback.*

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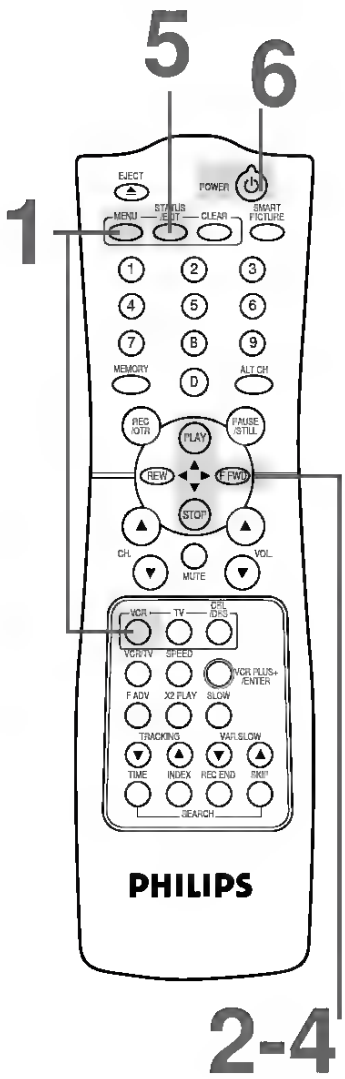
Time Zone

When using Automatic Clock Setting, specify your time zone. The VCR will update the clock according to your time zone.



1

Press the VCR button, then press the MENU button.

```
SELECT ▲▼ CHOOSE ►

→PROGRAM
  VCR SET UP
  TUNER SET UP
  SET CLOCK
  AUTO DBS        OFF
    RECORD LINK

TO END PUSH EXIT
```

2

Press the PLAY/▲ button or the STOP/▼ button to select SET CLOCK, then press the F.FWD/► button.

```
          SET CLOCK
→AUTO CLOCK          [ON]
  SET MANUAL CLOCK
  DAYLIGHT SVG TIME  [ON]
  SET TIME ZONE
    (AUTO)

TO CONTINUE PUSH MENU
SELECT ▲▼ CHOOSE ►
TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select SET TIME ZONE, then press the F.FWD/► button.

```
SELECT ▲▼ CHOOSE ►
→AUTO                ON
  ATLANTIC
  EASTERN
  CENTRAL
  MOUNTAIN
  PACIFIC
  ALASKA
  HAWAII
TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select your time zone. ON will appear beside your choice.

```
SELECT ▲▼ CHOOSE ►
  AUTO
  ATLANTIC
→EASTERN             ON
  CENTRAL
  MOUNTAIN
  PACIFIC
  ALASKA
  HAWAII
TO END PUSH EXIT
```

5

Press the STATUS/EXIT button.

6

Press the POWER button to turn off the VCR and allow it to reset the clock for your time zone.

Helpful Hints

- *SET TIME ZONE will not appear in the menu if AUTO CLOCK is set to OFF.*
- *You may need to turn off the VCR for several minutes to enable the VCR to set its clock for your time zone.*

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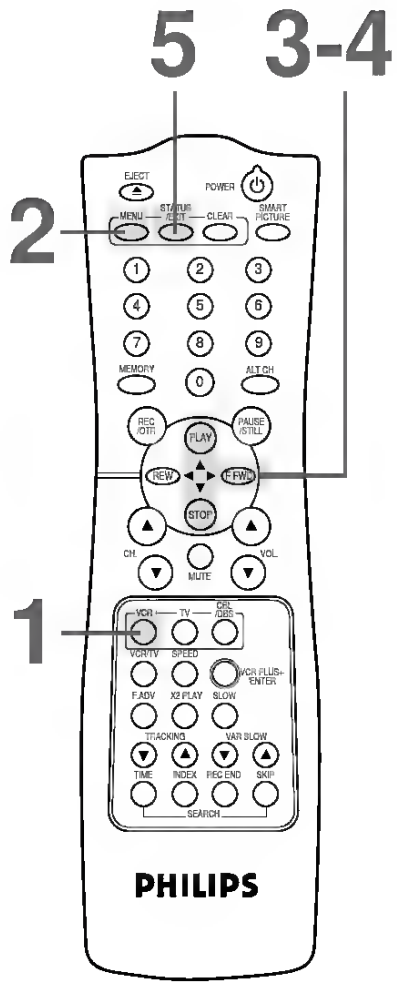
20 Daylight-Savings Time

You may program the VCR so its clock will automatically move forward one hour in April and turn back one hour in October. Daylight-Savings Time is ON when you receive your VCR. Turn Daylight-Savings Time ON or OFF by following the steps below.

Before you begin:

- Make sure you have set the clock. *Details are on pages 16-19.*



1

Press the VCR button.

2

Press the MENU button.

```
SELECT ▲▼ CHOOSE ▶

  →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS          OFF
      RECORD LINK

TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select SET CLOCK, then press the F.FWD/▶ button.

```
          SET CLOCK
  →AUTO CLOCK          [ON]
    SET MANUAL CLOCK
    DAYLIGHT SVG TIME  [ON]
    SET TIME ZONE
      (AUTO)

TO CONTINUE PUSH MENU
SELECT ▲▼ CHOOSE ▶
TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select DAYLIGHT SVG TIME. Then, press the F.FWD/▶ button so that OFF (or ON) appears beside DAYLIGHT SVG TIME.

```
          SET CLOCK
    AUTO CLOCK         [ON]
    SET MANUAL CLOCK
  →DAYLIGHT SVG TIME   [ON]
    SET TIME ZONE
      (AUTO)

TO CONTINUE PUSH MENU
SELECT ▲▼ CHOOSE ▶
TO END PUSH EXIT
```

5

Press the STATUS/EXIT button.

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Your VCR remote control **may** operate your TV. If the remote control doesn't operate your TV now, follow these steps.

1

Point the remote control at your TV and press the TV button. Then, press the POWER button. If your TV turns on or off, try the other TV buttons (*see pages 23-25*). If your TV doesn't turn on or off, or if the other buttons don't work, go to step 2.

2

Find the brand of your TV on the list below, and remember the two-digit number beside it.

TV CODES

EMERSON	14	PHILCO	14
FISHER	11	PHILIPS	01
GE	10	PHILIPS MAGNAVOX	01, 02, 03
GOLDSTAR	04	QUASAR	07
HITACHI	12	RCA	10
JVC	05	SAMSUNG	17
MAGNAVOX	01, 02, 03	SANYO	11
MARANTZ	13	SEARS	08, 11
MITSUBISHI	13	SHARP	16
MONTGOMERY WARD	14	SONY	09
PANASONIC	07	TOSHIBA	08
PANASONIC-GAOO	07	ZENITH	06, 15

3

Press the MUTE button.

4

Within 30 seconds, press the TV button.

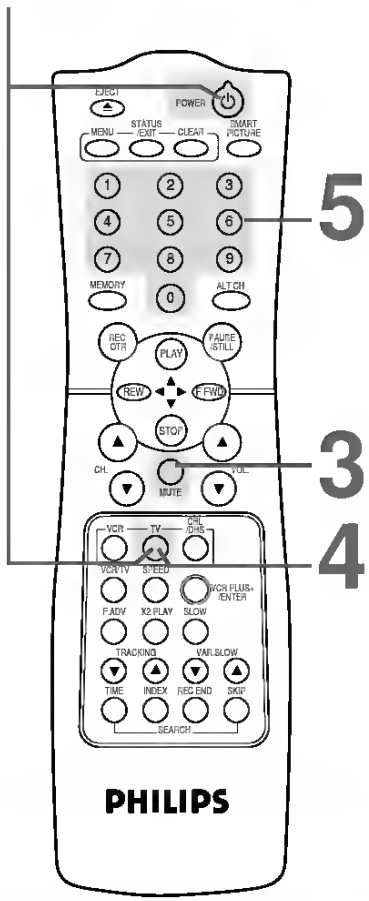
5

Within 30 seconds, press the Number buttons to enter the two-digit code for your TV brand. For example, if you have a Zenith TV, press Number buttons 0, 6.

6

Repeat step 1. If the remote control works your TV, you're finished. If the remote control still doesn't work your TV, repeat steps 3-5, using a different code for your brand (if available).

There is no guarantee that the remote will work your TV.



Helpful Hints

- *The remote control may only operate some features of your TV. For example, the remote control may turn on the TV power, but it may not change channels at the TV.*
- *If you can not change the channels at the TV using the Number buttons, press the VCR PLUS+/ENTER button after you press the Number buttons. It may change channels at the TV.*
- *When you replace the batteries in the remote control, you may need to program the remote control again. For future reference, you may want to write down or circle the code you used.*
- *Remember to point the remote control toward the TV (not the VCR) during steps 1-6.*

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22 Setting the Remote to Operate a Cable Box/Direct Broadcast System

Your VCR remote control **may** operate your Cable Box or Direct Broadcast System (DBS). If the remote control doesn't operate your Cable Box or DBS now, follow these steps.

1

Turn on the Cable Box/DBS. Then, point the remote control at your Cable Box/DBS and press the CBL/DBS button. Then, press the POWER button. If your Cable Box/DBS turns off, try the other Cable Box/DBS buttons *(see pages 23-25)*. If your Cable Box/DBS doesn't turn off, or if the other buttons don't work, go to step 2.

2

Find the brand of your Cable Box or DBS on the lists below and remember the two-digit number beside it.

CABLE BOX CODES

ARCHER 01, 05, 06, 44	MAGNAVOX 26	SAMSUNG 05, 06, 40, 42
CABLETENNA 01, 44	MATSUSHITA 16, 17, 97	SCIENTIFIC ATLANTA 08, 09
CABLEVIEW 04, 30, 42, 44, 52	MOVIETIME 42, 44	SIGNAL 26
CENTURY 44	NOVAVISION 08, 09	SL MARX 06, 40, 42, 44, 52
CITIZEN 04, 30, 42, 44, 52	NSC/NEC 40	SPRUCER 16, 17, 97
CURTIS 08, 09	OAK 11, 46	STANDARD COMPONENTS 42, 44
DIAMOND 01, 44	OAK SIGMA 11, 46	STARGATE 04, 06, 30, 40, 42, 44, 52
EAGLE 26, 40, 62	PANASONIC 16, 17, 97	TELEVIEW 06, 40, 42
EASTERN/REGENCY 28	PHILIPS 07, 23, 50	TOCOM 01, 33, 34, 42
GC BRAND 04, 30, 42, 44, 52	PIONEER 05, 06	UNIKA 01, 44
GEMINI/JASCO 04	PULSAR 04, 30, 42, 44, 52	UNIVERSAL 42, 44, 52
GENERAL ELECTRIC 01, 57	QUEST 05, 06	VIDEOWAY 07, 23, 50
GENERAL INSTRUMENT 01, 02, 03, 04, 34, 83	RCA 16, 17, 97	VIEWSTAR 26, 40, 62
HAMLIN 14, 15, 28, 41	REALISTIC 44	ZENITH 07, 23, 50
JERROLD 01, 02, 03, 04, 34, 83	RECOTON 44	
	REGAL 14, 15, 28, 41	
	REMBRANDT 01, 42, 44	

DIRECT BROADCAST SYSTEM CODES

MAGNAVOX 94,95	RCA 97	SONY 98

3

Press the MUTE button.

4

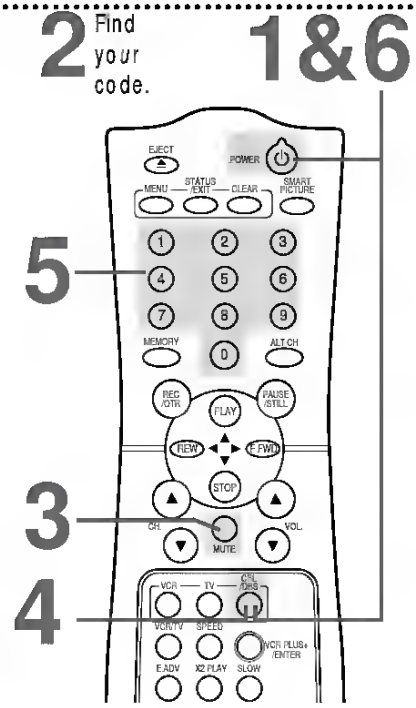
Within 30 seconds, press the CBL/DBS button.

5

Within 30 seconds, press the Number buttons to enter the two-digit code for your Cable Box or DBS. For example, if you have a Zenith Cable Box, press Number buttons 0,7.

6

Repeat step 1. If the remote control works your Cable Box or DBS, you're finished. If the remote control still doesn't work your Cable Box or DBS, repeat steps 3-5, using a different code for your brand, if available.



There is no guarantee that the remote will work your Cable Box or DBS.

Helpful Hints

- *The remote control may only operate some features of your Cable Box/DBS. For example, the remote control may turn off the Cable Box/DBS power, but it may not change channels at the Cable Box/DBS.*
- *If you can not change the channels at the Cable Box by using the Number buttons, press the VCR PLUS+/ENTER button after you press the Number buttons. It may change channels at the Cable Box.*
- *When you replace the batteries in the remote control, you may have to program the remote control again. For future reference, you may want to write down or circle the code you used.*
- *Remember to point the remote control toward the Cable Box/DBS (not the VCR) during steps 1-6.*
- *Some Cable Boxes can only be turned on at the Cable Box.*

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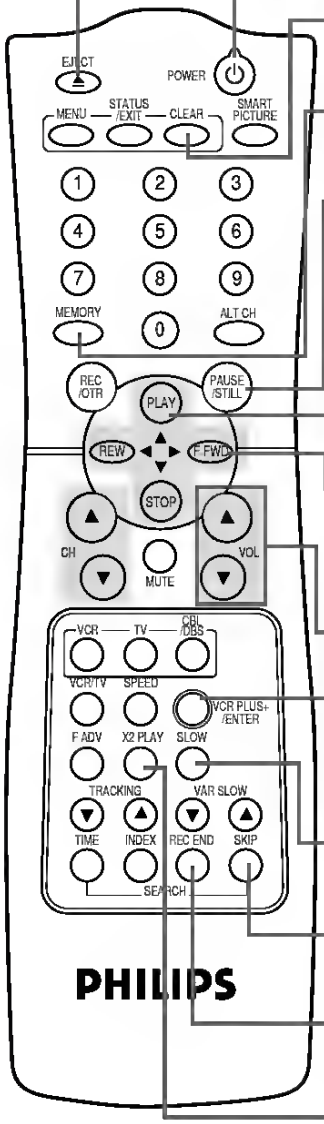

EJECT Button
Press to eject the tape.

POWER Button
Press to turn on or off the VCR, TV, Cable Box, or Direct Broadcast System. (You must first press the VCR, TV, or CBL/DBS button.)
Press and hold to set the Child Lock. *Details are on page 48.*

CLEAR Button
Press to erase incorrect information when programming VCR features.
Press to reset the real-time counter. *Details are on page 53.*

MEMORY Button
Press to memorize a tape position at which the real-time counter was set to 0:00:00. *Details are on page 53.*

PAUSE/STILL Button
While recording, press to pause the recording. Press a second time to resume normal recording. *Details are on page 31.* You can not pause a One-Touch Recording.
During playback, press to freeze the picture. Press again to resume playback. *Details are on page 47.*

PLAY/▲ Button
Press to play a tape; press to release Slow, Search, or Still mode and return to normal playback. *Details are on pages 46-47.* Press to select an item in the VCR's menu or some TV menus.

F.FWD (Fast Forward)/► Button
When playback is stopped, press to fast forward the tape at high speed. During playback, press to fast forward the tape while the picture stays on the screen. *Details are on page 46.* Or, use to adjust the controls in some TV menus.

VOL(ume) ▲/▼ Buttons
Press to adjust the TV's volume.

VCR PLUS+/ENTER Button
Press to set a timer recording with the VCR Plus+ programming system. *Details are on pages 38-41.*
Or, press after pressing the Number buttons to select a channel at the TV or the Cable Box. *Details are on pages 21-22.*

SLOW Button
During tape playback, press to view the picture in slow motion.
Press again to resume normal playback. *Details are on page 47.*

SKIP SEARCH Button
Press during tape playback to skip forward 30 seconds at a time. *Details are on page 52.*

REC(ord) END SEARCH Button
Press to search forward to an unrecorded portion of the tape. *Details are on page 52.*

X2 PLAY Button
During tape playback, press to watch a tape at two times the normal playback speed. *Details are on page 46.*

Helpful Hints

- *Press the VCR button before pressing other feature VCR buttons, press the TV button before pressing other TV feature buttons, press the CBL/DBS button before pressing other Cable Box/Direct Broadcast System feature buttons.*
- *The buttons with a shaded description may also operate features of your TV, Cable Box, or Direct Broadcast System.*
- *Buttons that are shaded in the illustration light up for five seconds when you press any button on the remote control.*

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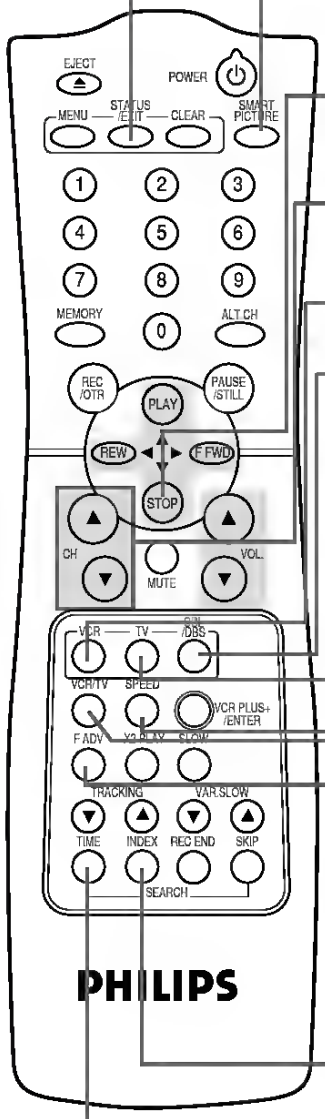
24 Remote Control Buttons (cont'd)



STATUS/EXIT Button
Press to access or remove the VCR's on-screen status display. *Details are on page 26.* Press to exit on-screen menus. Or, press the TV button, then press the STATUS/EXIT button to access or remove some TV displays or menus.

SMART PICTURE Button
During tape playback, press repeatedly to select a Smart Picture mode. *Details are on page 49.*

STOP/▼ Button
Press to stop the tape. Press to select an item in the VCR menu. Or, press when in TV mode to select an item in some TV menus.

CH(annel) ▲/▼ Buttons
Press to change channels at the VCR or at some TVs, Cable Boxes, or Direct Broadcast Systems.

VCR Button
Press to operate the VCR with the remote control.

CBL/DBS Button
Press to operate some Cable Boxes or Direct Broadcast Systems with the remote control. *Details are on page 22.*

TV Button
Press to operate some TVs with the remote control. *Details are on page 21.*

SPEED Button
Press to select the recording speed (SP or SLP). *Details are on pages 36 and 60.*

VCR/TV Button
Press to select VCR or TV position.

- **VCR Position**
  Use to watch a tape, to watch a program while recording it, or to watch a TV broadcast using the CH(annel) ▲/▼ or Number buttons to change channels at the VCR. If the VCR light appears on the display panel of the VCR, it is in VCR position.
- **TV Position**
  Use to watch TV (changing channels at the TV) or to watch one program while recording another. *Details are on page 33.* If the VCR light doesn't appear on the display panel of the VCR, it is in TV position.

F(rame). ADV(ance) Button
Press when in Still mode to advance the picture one frame at a time. *Details are on page 47.*

INDEX SEARCH Button
Press to fast forward or rewind to the starting points of programs that you have recorded on a tape. *Details are on page 51.*

TIME SEARCH Button
Press to fast forward or rewind the tape a specific length of time. *Details are on page 50.*

Helpful Hints

- *Press the VCR button before pressing other feature VCR buttons; press the TV button before pressing other TV feature buttons; press the CBL/DBS button before pressing other Cable Box/Direct Broadcast System feature buttons.*
- *The buttons with a shaded description may also operate features of your TV, Cable Box, or Direct Broadcast System.*
- *Buttons that are shaded in the illustration light up for five seconds when you press any button on the remote control.*

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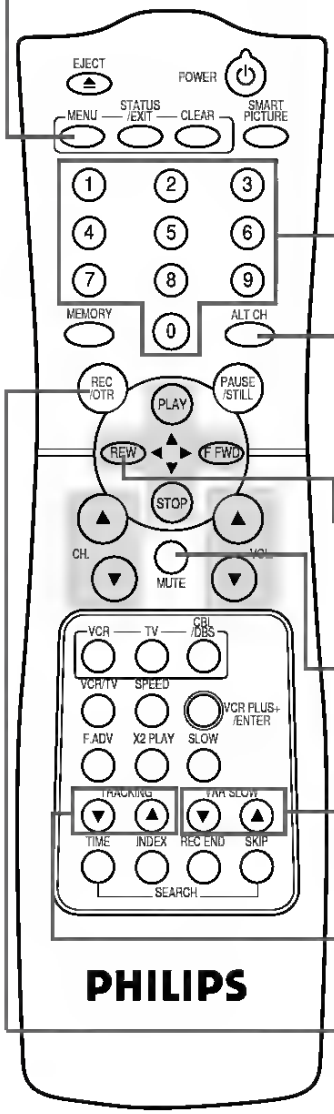

MENU Button
Press to access the VCR menu or some TV menus.

Number Buttons
Press to select channels at the VCR, TV, Cable Box, or Direct Broadcast System; use to set up VCR features (such as the clock).

- **Cable Users**

Enter channel numbers as a two-digit number for the quickest results. For example, to select channel 6, press 0,6. If you only press the Number 6 button, channel 6 will be selected after a brief delay. (There also may be a brief delay when you select channels 10, 11, and 12.) If you want to select channels 100 and above, enter channel numbers as a three-digit number. For example, to select channel 117, press 1, 1, 7.

- **Antenna Users**

Enter channel numbers as a two-digit number for the quickest results. For example, to select channel 5, press 0,5. If you only press the Number 5 button, channel 5 will be selected after a brief delay. You may only select channels 2-69.

ALT. CH (Alternate Channel) Button
Press while in TV mode to return to the TV channel you were viewing immediately before switching to your current channel. (If you press the ALT. CH button while in VCR position, the TV will change to the channel you last selected before choosing channel 3 or 4 to use the VCR. However, the TV channel will not be clear, because you are in VCR position.)

REW (ind)/◄ Button
When tape playback is stopped, press to rewind the tape at high speed. During playback, press to rewind the tape while the picture stays on the screen. *Details are on page 46.* Press to return to a previous VCR on-screen menu. Or, press to adjust the controls in some TV menus.

MUTE Button
Press to eliminate the TV's sound. Press again to restore the volume. If you mute the volume, pressing the VOL(ume) ▲ button also will restore the volume.

VAR(iable). SLOW Buttons
During slow motion playback, press to vary the tape playback speed from 1/6 to 1/30 of normal speed. *Details are on page 47.*

TRACKING ▲/▼ Buttons
During normal or slow motion playback, press to adjust the tracking. *Details are on page 45.*

REC(ord)/OTR Button
Press once to start a recording. *Details are on page 31.* Or, press repeatedly to start a One-Touch Recording (OTR). *Details are on page 32.*

Helpful Hints

- *Press the VCR button before pressing other feature VCR buttons, press the TV button before pressing other TV feature buttons, press the CBL/DBS button before pressing other Cable Box/Direct Broadcast System feature buttons.*
- *The buttons with a shaded description may also operate features of your TV, Cable Box, or Direct Broadcast System.*
- *Buttons that are shaded in the illustration light up for five seconds when you press any button on the remote control.*

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26 On-Screen Status Displays

A status display will appear when you press the STATUS/EXIT button or certain function buttons. The contents of the status display will vary. To choose the status display mode, follow the steps below.

If you select STATUS ON, then select COUNTER ONLY ON:

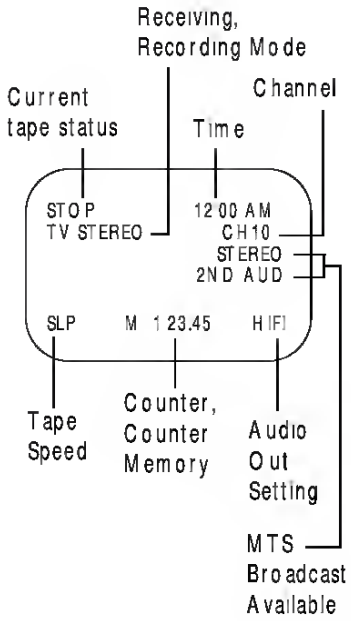
- Whenever you press the STOP/▼ button or the PLAY/▲ button, the status display will appear for five seconds. After five seconds, only the counter will remain on the screen. You must press the STATUS/EXIT button to remove it. Portions of the status display also may appear when you press other function buttons.

If you select STATUS ON, then select COUNTER ONLY OFF:

- Whenever you press the STOP/▼ button or the PLAY/▲ button, the status display will appear for five seconds. Portions of the status display also may appear when you press other function buttons.

If you select STATUS OFF:

- The status display will not appear when you press function buttons. You must press the STATUS/EXIT button to see the status display.



1

Press the VCR button, then press the MENU button.

2

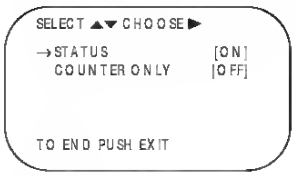
Press the PLAY/▲ button or the STOP/▼ button to select VCR SET UP, then press the F.FWD/► button.

3

Press the PLAY/▲ button or the STOP/▼ button to select ON SCREEN MODE, then press the F.FWD/► button.

4

Press the PLAY/▲ button or the STOP/▼ button to select STATUS, then press the F.FWD/► button so that OFF (or ON) appears beside STATUS.



5

If you set STATUS to OFF, go to step 6. If you set STATUS to ON, press the PLAY/▲ button or the STOP/▼ button to select COUNTER ONLY, then press the F.FWD/► button so that OFF (or ON) appears beside it.

6

Press the STATUS/EXIT button.

Helpful Hint

- *You may not access a status display when viewing a still picture, during slow motion playback, or during forward or reverse searching.*

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Cassette Compartment
Insert a video cassette tape here.

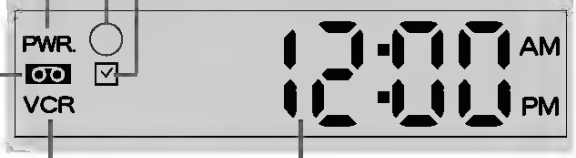
Record Light
This light appears during a recording. It flashes when a recording is paused.

PWR.(power) Light
This light appears when the power is on.

Cassette-Inside Light
This light appears when a tape is in the VCR.

VCR Light
This light appears when the VCR is in VCR position. This light does not appear when the VCR is in TV position. *Details are on pages 24 and 28*

Timer Light
This light glows when the VCR is turned off to set a timer recording, during a timer recording, or during a One-Touch Recording. It flashes if the power is off for a timer recording, but no tape is in the VCR. It flashes when all timer recordings are finished.



Clock/Feature Display with Auto Dimmer
This display tells you the current time (when the clock is set) and briefly displays which feature the VCR is currently performing. Refer to the feature messages below. When the VCR power is off, the brightness of the display will dim slightly.

PLAY	: Playback
FF	: Fast forward
REW	: Rewind
STOP	: Stop
REC	: Recording

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PAUSE Button
While recording, press to pause the recording. Press again to resume recording. *Details are on page 31.* You can not pause a One-Touch Recording. During tape playback, press to freeze the picture. Press again to resume playback. *Details are on page 47.*

Remote Sensor
Receives a signal from your remote control so you can operate your VCR from a distance.

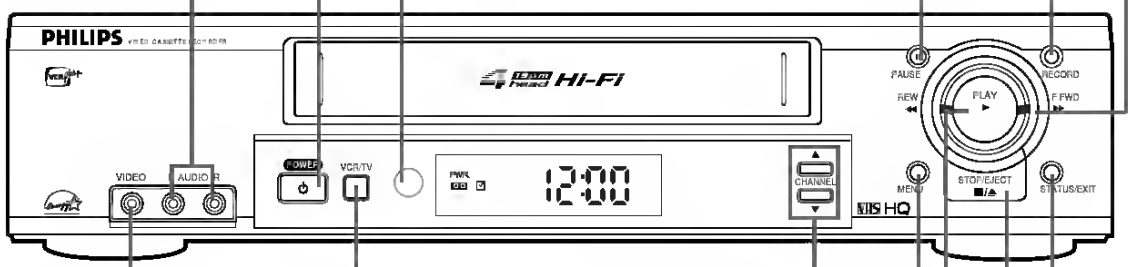
POWER Button
Press to turn the VCR power on and off.

AUDIO In Jacks
Connect audio cables coming from the audio out jacks of a camcorder, another VCR, or an audio source here. *Details are on page 43.*

F.FWD (Fast Forward) Dial
When playback is stopped, turn the dial right to fast forward the tape at high speed. During tape playback, turn the dial right to fast forward the tape while the picture stays on the screen. Turning the dial right repeatedly switches the search between regular and high speed searching for some recordings. *Details are on page 46.* Turn the dial right to select an item in the VCR menu or to change the setting of a menu item.

REW (ind) Dial
When playback is stopped, turn the dial left to rewind the tape at high speed. During playback, turn the dial left to rewind the tape while the picture stays on the screen. Turning the dial left repeatedly switches the search between regular and high speed searching for some recordings. *Details are on page 46.* Turn the dial left to return to a previous VCR menu.

RECORD Button
Press once to start a recording. Press repeatedly to start a One-Touch Recording. *Details are on page 32.*



VIDEO In Jack
Connect a video cable coming from the video out jack of a camcorder, another VCR, or an audio-visual source (laser disc player, digital video disc player, etc.) here. *Details are on page 43.*

VCR/TV Button
Press to select VCR or TV position.

- **VCR Position**
  Use to watch a tape, to watch a program while recording it, or to watch a TV program (changing channels at the VCR). When the VCR light appears on the display panel, the VCR is in VCR position.
- **TV Position**
  Use to watch TV (changing channels at the TV) or to watch one program while recording another. When the VCR light does not appear on the display panel, the VCR is in TV position.

CHANNEL (▼/▲) Buttons
Press to change channels at the VCR. Or, press to adjust the tracking of a tape during normal playback or slow motion playback. Also, press to remove vertical jitter in a Still picture.

MENU Button
Press to access the VCR menu.

PLAY Button
Press to play a tape. Press to release Slow, Search, or Still mode and return to playback. *Details are on pages 46-47.* Press to select an item in the VCR menu.

STOP/EJECT Button
Press once to stop the tape. When playback is stopped, press to eject the tape. Press to select an item in the VCR menu.

STATUS/EXIT Button
Press to access or remove the on-screen status display. *Details are on page 26.* Press to remove the VCR menu.

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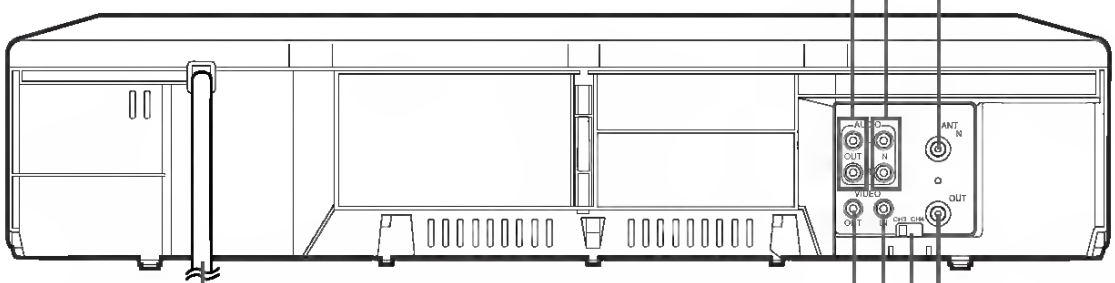
ANT(enna) IN Jack
Connect your antenna or cable here. *Details are on pages six-10.*

AUDIO IN Jacks
Connect audio cables coming from the AUDIO OUT Jacks of a camcorder, another VCR, or an audio source here. *Details are on page 43.*
If you connect other equipment to the AUDIO and VIDEO IN jacks on the back of the VCR, select channel 001 (AV REAR) at the VCR. This allows you to view or hear the materials playing on the other equipment.

AUDIO OUT Jacks
Connect audio cables going to the AUDIO IN Jacks of a camcorder, another VCR, or an audio system here. *Details are on pages 43 and 55*



AC Power Cord
Connect to a standard AC outlet to supply power to the VCR.

VIDEO OUT Jack
Connect a video cable going to the VIDEO IN Jack of a camcorder, another VCR, or an audio-visual system (monitor, laser disc player, digital video disc player, etc.) here. *Details are on pages 43 and 55.*

VIDEO IN Jack
Connect a video cable coming from the VIDEO OUT Jack of a camcorder, another VCR, or an audio-visual source (laser disc player, digital video disc player, etc.) here. *Details are on page 43.*
If you connect other equipment to the AUDIO and VIDEO IN jacks on the back of the VCR, select channel 001 (AV REAR) at the VCR. This allows you to view or hear the materials playing on the other equipment.

CH3/CH4 Switch
Set to channel 3 or 4 to use your TV with your VCR. *Details are on pages six-nine.*

OUT Jack
Use the supplied black RF coaxial cable to connect this jack to the ANTENNA IN Jack on your TV, Cable Box, or Direct Broadcast System. *Details are on pages six-nine.*

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Read and follow these steps to play a tape.

1

Turn on the TV and set it to channel 3 or 4 – the channel to which the CH3/CH4 switch on the back of the VCR is set.

2

Insert a tape in the VCR. The PWR., VCR, and Cassette-Inside lights will appear on the display panel. If the tape's record tab is missing, playback will start automatically.

3

If playback does not start automatically, press the VCR button, then press the PLAY/▲ button.

4

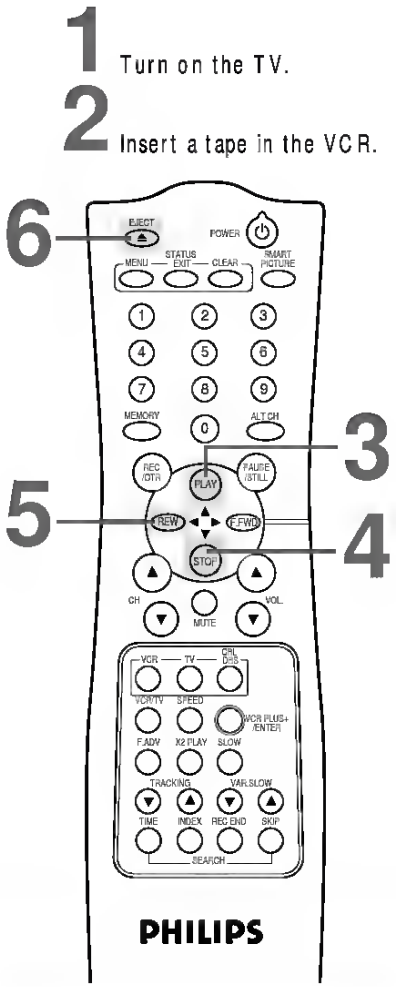
Press the STOP/▼ button to stop playback.

5

Press the REW (ind)/◄ button to rewind the tape.

6

Press the EJECT button to remove the tape.



S-VHS Quasi Play Back (SQPB)

This unit has a SQPB function that allows you to view a tape you recorded in S-VHS format. An S-VHS format tape will play the same as a normal format tape. This unit automatically detects whether the tape is in S-VHS format or in normal format.
When you play an S-VHS format tape on this unit, you can not get the high resolution that would be available on an S-VHS VCR.
Noise lines (black and white streaks) may appear on the picture.

Helpful Hints

- *If the tape you want to play is already in the VCR, make sure the VCR power is on and the VCR is in VCR position. (The VCR light will appear on the display panel. If it does not, press the VCR/TV button once.) Press the VCR button, then press the PLAY/▲ button.*
- *Other playback options and features are on pages 44-57.*
- *If REPEAT PLAY is ON, playback will begin automatically when you insert a tape, even when the record tab is intact. (However, playback will not begin if the VCR power is off and a timer recording is set.)*

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Read and follow these steps to record a television program.

1

Turn on the TV and set it to channel 3 or 4 the channel to which the CH3/CH4 switch on the back of the VCR is set.

2

Insert a tape with its record tab intact into the VCR.

3

Press the VCR button.

4

If the VCR light appears on the display panel, go to step 5. **If the VCR light does not appear, press the VCR/TV button once.**

5

Press the SPEED button until the desired tape speed appears briefly on the TV screen. *(Details about tape speed are on page 36.)*

6

Use the CH(annel) ▲/▼ buttons or the Number buttons to select the channel you want to record.

7

Press the REC(ord)/OTR button once to start recording. The Record light will appear on the VCR display panel.

8

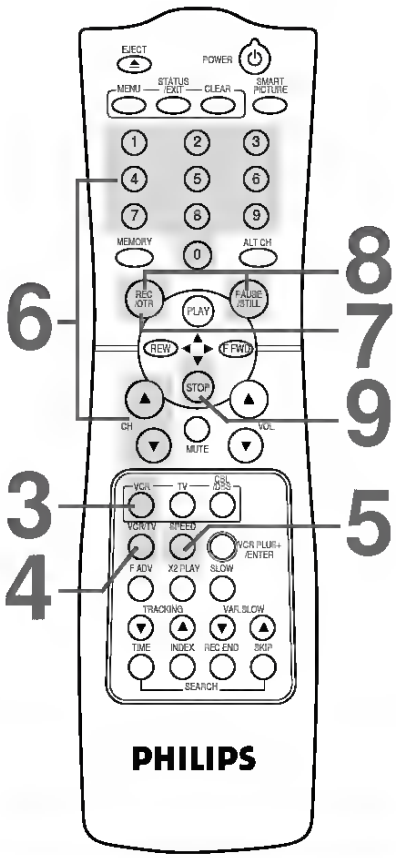
To pause the recording, press the PAUSE/STILL button once. The Record light will flash. **To resume recording, press the REC(ord)/OTR button or press the PAUSE/STILL button again.** The Record light will come on again.

9

To stop recording, press the STOP/▼ button.

1 Turn on the TV.

2 Insert a tape in the VCR.



Helpful Hints

- *If you press the REC(ord)/OTR button when there is not a tape in the VCR, NO CASSETTE will flash on the screen.*
- *If you press the REC(ord)/OTR button while a tape without a record tab is in the VCR, the VCR will eject the tape and PROTECTED CASSETTE CANNOT RECORD will flash on the screen.*
- *Other recording options are on pages 32-43.*
- *You can change the tape speed during a recording, but some distortion will appear on the tape.*
- *The VCR will record in a preset volume.*

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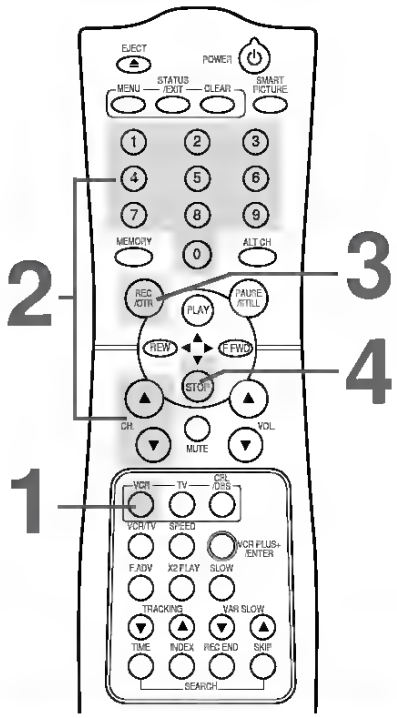
32 One-Touch Recording

The One-Touch Recording feature allows you to set an immediate timed recording 30 minutes to eight hours long. Before you begin:

- Set up the channels at the VCR. *Details are on page 12.*
- Select a recording speed (SP, SLP) with the SPEED button. *Details are on page 36.*
- Put a tape in the VCR. Make sure the tape's record tab is intact and the tape is long enough to record the program(s).
- Place the VCR in VCR position. (The VCR light will appear on the display panel. If it does not, press the VCR/TV button once.)



1

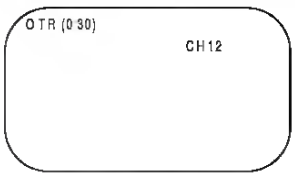
Press the VCR button.

2

Press the CH(annel) ▲/▼ buttons or the Number buttons to select the channel you want to record.

3

Press the REC(ord)/OTR button repeatedly until the desired recording length (30 minutes to eight hours) appears on the TV screen. Recording will begin immediately. The Record light and the Timer light will appear on the VCR display panel. When the OTR finishes, the VCR shuts itself off.



4

To stop an OTR before recording is finished, press the STOP/▼ button.

To cancel the OTR but continue recording, press the REC(ord)/OTR button repeatedly until REC appears in the upper left corner of the TV screen. (STATUS must be ON. See page 26 for details.) The Record light will remain on the display panel of the VCR, but the Timer light will disappear.

Helpful Hints

- *To check the time remaining for an OTR that is in progress, press the STATUS/EXIT button.*
- *To change the recording length while an OTR is in progress, press the REC(ord)/OTR button until the desired length appears on the screen.*
- *If you begin an OTR when another recording is paused, the OTR will begin.*
- *You can not pause an OTR.*
- *If the preset time for a timer recording comes up during an OTR, the OTR has priority. A message will remind you when the timer recording was scheduled to begin. You may let the OTR continue, the timer recording will not take place. Or, stop the OTR and turn off the VCR immediately. The timer recording will take place if you turn off the VCR before the timer recording's scheduled start time.*
- *If the end of the tape is reached during a One-Touch Recording, the VCR will eject the tape and turn itself off.*

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1

Press the VCR button.

2

Press the REC(ord)/OTR button to start a recording of the current channel. (See page 31.) The Record light will appear on the VCR display panel.

3

Press the VCR/TV button to put the VCR in TV position. The VCR light will disappear from the VCR's display panel.

4

Press the TV button, then press the CH(annel) ▲/▼ or Number buttons to choose the channel you want to watch at the TV. (If the VCR remote control doesn't operate your TV, use the TV remote control to select the channel.)

5

To return to the channel being recorded, press the TV button, then select channel 03 or 04 at the TV (the channel to which the CH3/CH4 switch on the back of the VCR is set). (If the VCR remote control doesn't operate your TV, use the TV remote control to select channel 03 or 04.)

6

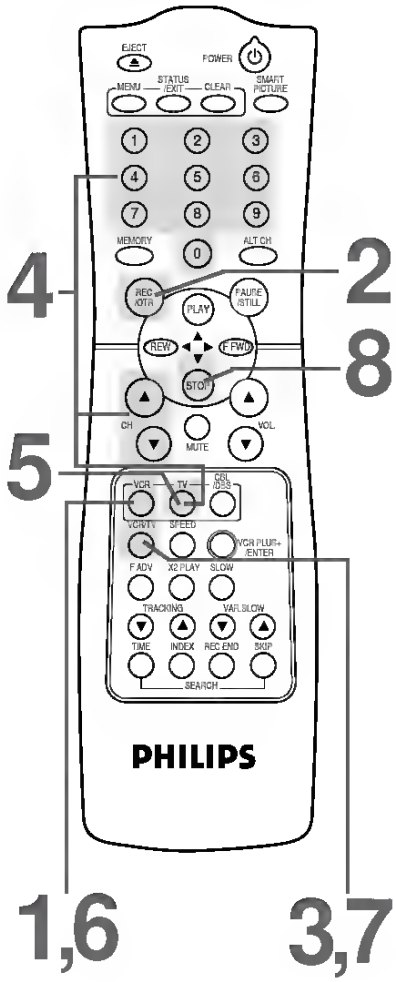
Press the VCR button.

7

Press the VCR/TV button to put the VCR in VCR position. The VCR light will appear on the display panel. The channel being recorded will appear on the TV screen.

8

Press the STOP/▼ button to stop the recording.



Helpful Hints

- *If your VCR remote control does not operate your TV, see page 21 for more information.*
- *If you use a Cable Box or Direct Broadcast System, you may not be able to watch one channel while recording another. See pages eighty-nine for details.*

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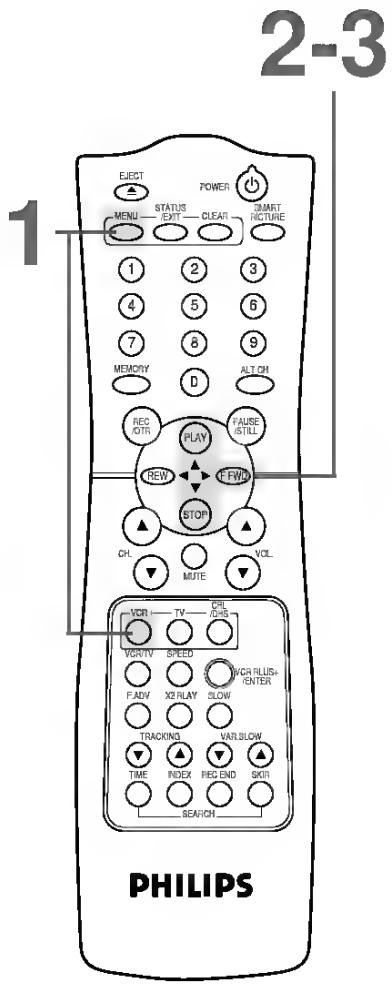
34 Timer Recording

Follow the steps below to program your VCR to record TV programs while you're away from home. The VCR will turn itself on, record, and turn itself off automatically. Before you begin:

- Set up the channels at the VCR. *Details are on page 12.*
- Set the clock. *Details are on pages 16-20.*
- Put a tape in the VCR. Make sure the tape's record tab is intact and the tape is long enough to record the program(s).
- Put the VCR in VCR position. The VCR light will appear on the display panel. If it does not, press the VCR/TV button once.

Do each step within 60 seconds of the previous step.



1

Press the VCR button, then press the MENU button.

```
SELECT ▲▼ CHOOSE ►
   →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS      OFF
      RECORD LINK

TO END PUSH EXIT
```

2

Press the PLAY/▲ button or the STOP/▼ button to select PROGRAM, then press the F.FWD/► button.

```
SELECT ▲▼ CHOOSE ►
   →ONCE
    DAILY
    WEEKLY
    PROGRAM REVIEW


TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select a ONCE, DAILY, or WEEKLY recording. Then, press the F.FWD/► button.

- **ONCE:** The VCR will record a TV program on any day you choose, up to 12 months away.
- **DAILY:** The VCR will record the same channel every day from Monday to Friday – starting at the same time and recording for the same length of time.
- **WEEKLY:** The VCR will record the same channel on the same day, at the same time, and for the same length of time every week.

Daily Recording (example)

```
DAILY PROGRAM (MON-FRI)
  PROGRAM   1 2 3 4 5 6 7 8


SELECT PROGRAM NUMBER
TO END PUSH EXIT
```

Helpful Hint

- *If you need to make a correction while programming a timer recording, press the CLEAR button until the cursor is flashing on the item you want to change. Then enter the correct information.*

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4

Use the Number buttons (1-8) to select a slot in which to store the timer recording. There are eight slots. Numbers for open slots will flash on the screen.

NOTE: If you enter a number for a slot that has been used already to store a timer recording, PREVIOUSLY SET PROGRAM will appear on the screen briefly. Information about the program in that slot will appear on the screen. If this happens, press the STATUS/EXIT button, then select another number.

5

Use the Number buttons to enter the channel you want to record.

- Cable Users, enter channel numbers as a two-digit number for the quickest results. For example, to select channel 6, press 0,6. If you only press the Number 6 button, channel 6 will be selected after a brief delay. There also may be a brief delay when you select channels 10, 11, and 12. If you want to select channels 100 and above, enter channel numbers as a three-digit number. For example, to select channel 117, press 1, 1, 7.
  Antenna Users, enter channel numbers as a two-digit number for the quickest results. For example, to select channel 5, press 0,5. If you only press the Number 5 button, channel 5 will be selected after a brief delay. You can select only channels 2-69.
- If you are recording from line input, press 0,0 to select AV REAR.
- If you are using a Cable Box/DBS, enter the Cable Box/DBS output channel (03 or 04). Set the Cable Box/DBS to the channel you want to record. Leave the Cable Box/DBS on for the timer recording. *See page eight for details.*

6

Press two Number buttons for the hour you want the recording to begin. Press two Number buttons for the minute you want the recording to begin. Press 1 for AM or 2 for PM. For example, for 9:30 PM, press 09, 30, 2.

```
ONE TIME PROGRAM
  PROGRAM    1
  CHANNEL    10
  TIME ON    -- --

TO CORRECT PUSH CLEAR
TO END PUSH EXIT
```

7

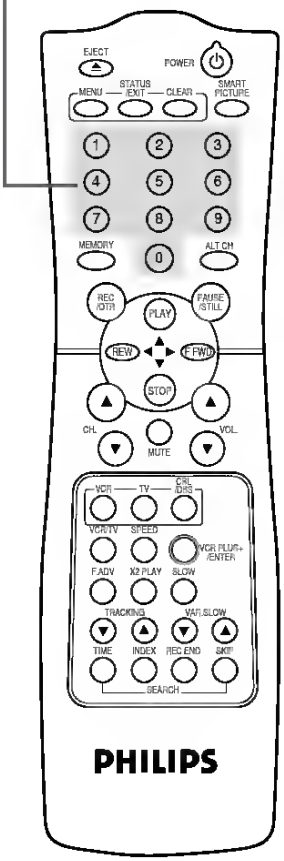
Follow the instructions in step 6 to enter the recording's stop time. (AM or PM will be set automatically.)

```
ONE TIME PROGRAM
  PROGRAM    1
  CHANNEL    10
  TIME ON    09:30 PM
  TIME OFF   -- --

TO CORRECT PUSH CLEAR
TO END PUSH EXIT
```

Instructions continue on page 36.

4-7



Helpful Hints

- *Entries that do not match the VCR's clock or calendar will cause a question mark to appear on the screen.*
- *If you are recording from line input, connect the audio and video cables to the AUDIO IN and VIDEO IN jacks on the back of the VCR. (Please see illustration on page 43.)*

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8

Press the Number 1 button to record in SP speed or the Number 2 button to record in SLP speed. (See the chart below.) You cannot use the SPEED button at this time.

```
ONE TIME PROGRAM
  PROGRAM      1
  CHANNEL      10
  TIME ON      09:30 PM
  TIME OFF     11:00 PM
  REC SPEED    SP
    SP=1  SLP=2

TO CORRECT PUSH CLEAR
TO END PUSH EXIT
```

9

Press two Number buttons for the month and two Number buttons for the day you want to record the program. For example, for July 10, 2001, press 07, 10. The day of the week and the year will appear automatically. (You cannot program the VCR to record more than one year in advance.)

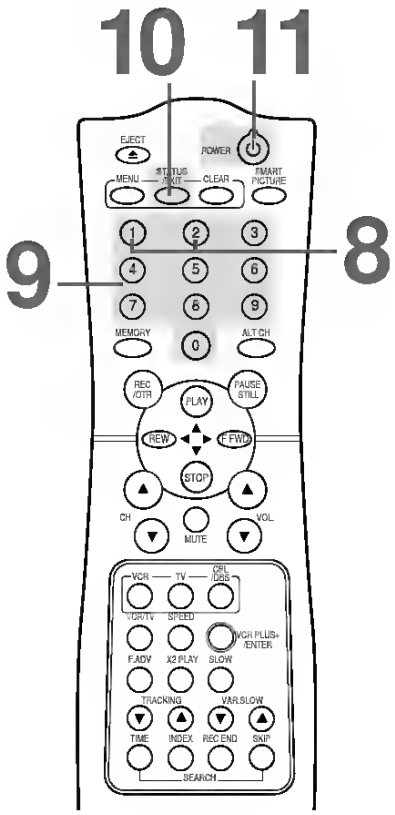
```
ONE TIME PROGRAM
  PROGRAM      1
  CHANNEL      10
  TIME ON      09:30 PM
  TIME OFF     11:00 PM
  REC SPEED    SLP
  START DATE   07/10/01
               TUE.
TO CORRECT PUSH CLEAR
TO END PUSH EXIT
```

10

Press the STATUS/EXIT button. PROGRAM WAS COMPLETED / PLEASE TURN OFF VCR FOR TIMER RECORDING will appear on the screen briefly. (If PROGRAM NOT COMPLETED appears, try again from step 1.)

11

Press the POWER button to turn off the VCR power. The Timer light will appear on the display panel. The Timer light will flash if no tape is in the VCR.
If the timer recording will take place several hours or days from now, you may use the VCR until time for the recording. Turn off the VCR a few minutes before the recording starts. If you forget to turn off the VCR, PLEASE TURN OFF VCR FOR TIMER RECORDING flashes on your TV screen two minutes before a timer recording starts. Press the CLEAR button to remove the message.



Turn off the VCR for the recording. Insert a tape in the VCR. Leave the Cable Box/DBS on (if applicable).

Tape Speeds
This chart shows the recording/playback time for three types of video cassettes (T160, T120, and T60). There are three playback speeds: SP, LP, and SLP. When recording, you can change the tape speed (SP or SLP) using the SPEED button. You cannot record in LP speed. You can play a tape only in the speed in which you recorded it. The slower the tape speed, the more programming you can fit on a tape. SLP is the slowest tape speed.

Tape Speed	Cassette type / Playback Time T160	T120	T60
SP (standard play)	2 hrs. 40 mins.	2 hrs.	1 hr.
LP (long play) (playback only)	5 hrs. 20 mins.	4 hrs.	2 hrs.
SLP (super long play)	8 hrs.	6 hrs.	3 hrs.

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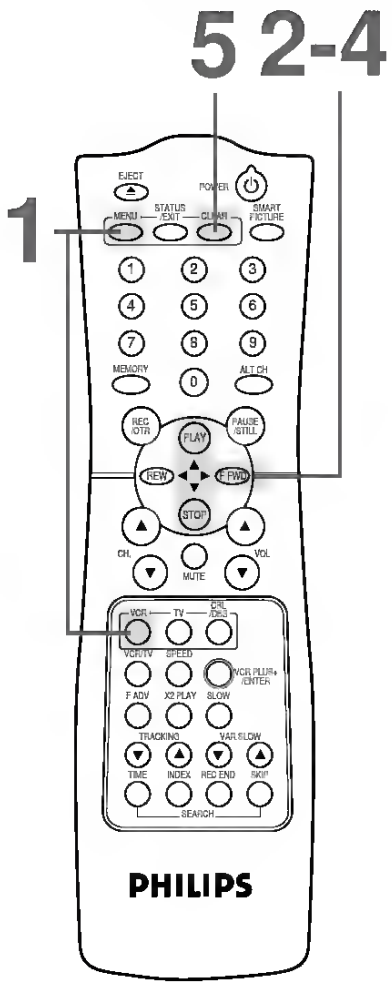
Checking or Cancelling Timer Recordings



1

With the VCR on and in VCR position (the VCR light will appear on the display panel), **press the VCR button, then press the MENU button.**

2

Press the PLAY/▲ button or the STOP/▼ button to select PROGRAM, then press the F.FWD/► button.

3

Press the PLAY/▲ button or the STOP/▼ button to select PROGRAM REVIEW, then press the F.FWD/► button. The timer recording information for the program in the lowest numbered slot will appear on the screen. If no timer recordings are set, nothing will happen when you press the F.FWD/► button.

4

Press the F.FWD/► button repeatedly to review all programmed timer recordings. If you don't press the F.FWD/► button within 10 seconds, the VCR will automatically display information about the next programmed timer recording. This will continue until all timer recordings have been displayed. Then the menu will disappear.

5

To cancel the timer recording displayed, press the CLEAR button. Either the display will disappear or information about other timer recordings will appear. If you do not press any other buttons, the display will disappear after all timer recordings have been displayed.

6

Repeat steps 1 - 4 to make sure you have cleared the correct timer recording.

Helpful Hints

- *CLASH may flash on the screen when you finish setting a timer recording. This means that the timer recording you just programmed and another timer recording overlap. The current timer recording will not take place. You may choose to cancel the overlapping timer recording.*
- *To stop a started timer recording, press the STOP/EJECT button on the front of the VCR.*
- *With ShowGuard, the VCR will restore timer recordings when the clock is reset after a power failure. Details are on page 58*

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38 Setting Up the VCR Plus+ Programming System

1

First, fill in the boxes on this page. It will only take a few minutes, and you must do it if you want the VCR Plus+ programming system to work properly.

Since the channel numbers of the stations you receive may not be the same as the station numbers, and since channel numbers differ from area to area, you must program the VCR with your local channel information. To fill in the boxes, you will need 1) a cable channel list, if applicable (you can request one from your cable company), and 2) a chart that lists VCR Plus+ channel numbers, which you can find in your TV guide or the TV listings of your local newspaper.

NOTE: If you are using a Cable Box/DBS, the Cable/TV channel must be 3 or 4 (the Cable Box/DBS output channel) for every VCR Plus+ channel.

Channels		
Station Call Letters	VCR PLUS+ CH.	CABLE/TV CH.

Channels		
Station Call Letters	VCR PLUS+ CH.	CABLE/TV CH.

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2

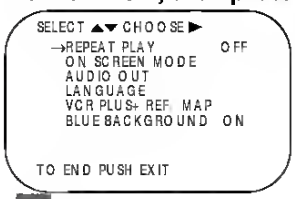
Now, compare the channel numbers you have written in the VCR PLUS+ CH. and CABLE/TV CH. columns. For stations whose VCR Plus+ and Cable/TV channels do not match, you must tell the VCR the VCR Plus+ and Cable/TV channel numbers by following steps 3-7. Make each entry within 60 seconds of the previous entry.

3

Press the VCR button, then press the MENU button.

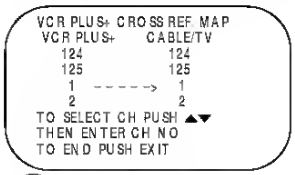
4

Press the PLAY/▲ button or the STOP/▼ button to select VCR SET UP, then press the F.FWD/► button.



5

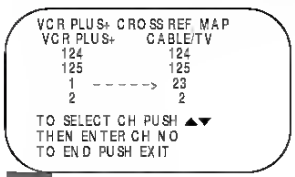
Press the PLAY/▲ button or the STOP/▼ button to select VCR PLUS+ REF. MAP, then press the F.FWD/► button.



6

Look at the lists you filled in on page 38. **For stations whose VCR Plus+ and Cable/TV channels do not match, press the PLAY/▲ button or the STOP/▼ button until the arrow is beside the VCR Plus+ channel you need. Then, press the Number buttons to enter the corresponding Cable/TV channel from your list.** Enter all the stations on your list.

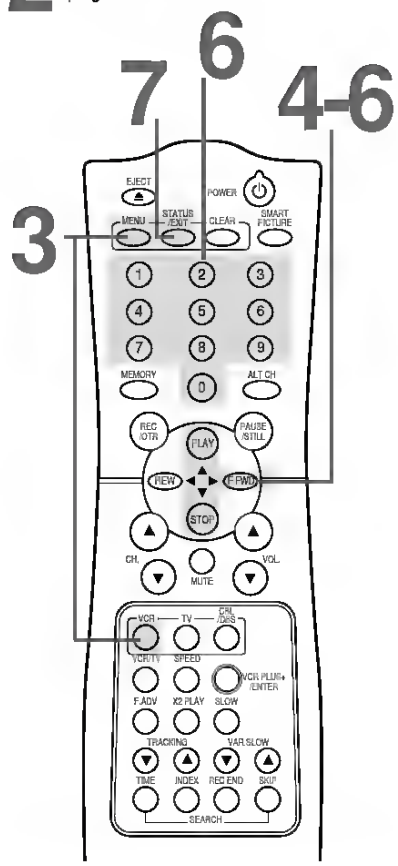
- If you are recording from line input, press 0,0 to select AUX.
- **If you are using a Cable Box/DBS, the Cable/TV channel will be 3 or 4 (the Cable Box/DBS output channel) for every VCR Plus+ channel. You must set the Cable Box/DBS to the channel you want to record; leave the Cable Box/DBS on for the timer recording.**



7

Press the STATUS/EXIT button.

2 Examine the lists on page 38.



Helpful Hints

- *To erase a Cable/TV channel number, repeat steps 3-5 on this page. Then, press the PLAY/▲ button or the STOP/▼ button until the arrow appears beside the Cable/TV channel you need to erase. Press the CLEAR button, then press the STATUS/EXIT button.*
- *When you receive the VCR, all the VCR Plus+ channel numbers and Cable/TV channel numbers are the same.*
- *If you are recording from line input, connect the audio and video cables to the AUDIO IN and VIDEO IN jacks on the back of the VCR. (Please see illustration on page 43.)*

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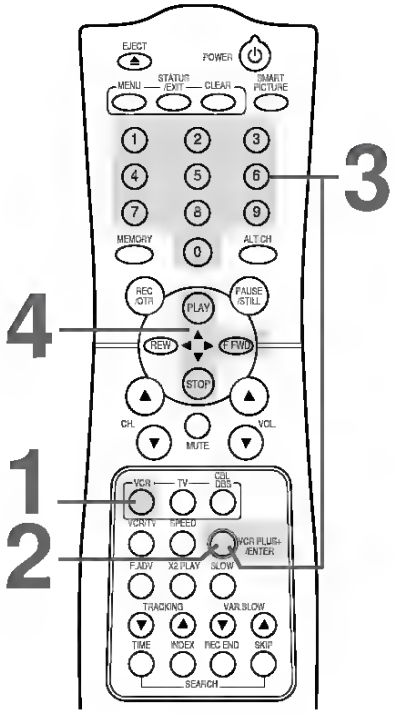
40 Timer Recording with the VCR Plus+ Programming System

Follow these steps to set a timer recording with the PlusCode programming numbers in your TV guide. Before you begin:

- Set up the channels at the VCR. *Details are on page 12.*
- Set up the VCR Plus+ and Cable/TV channel numbers. *Details are on pages 38-39.*
- Set the clock. *Details are on pages 16-20.*
- Put a tape in the VCR.
- Make sure the VCR light appears on the display panel. If it does not, press the VCR/TV button once.

Do each step within 60 seconds of the previous step.



1

Press the VCR button.

2

Press the VCR PLUS+/ENTER button.

```
VCR PLUS+ PROG

  PLUS CODE  - - - - - - - -



TO END PUSH EXIT
```

3

Press the Number buttons to enter the PlusCode programming number of the program you wish to record. Then, press the VCR PLUS+/ENTER button.

```
VCR PLUS+ PROG

  PLUS CODE  13255 - - -



TO SET PUSH VCR+
TO CORRECT PUSH CLEAR
TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select a ONCE, DAILY, or WEEKLY recording. Then, press the F.FWD/► button.

- **ONCE:** The VCR will record the selected program once.
- **DAILY:** The VCR will record the same program every day from Monday to Friday.
- **WEEKLY:** The VCR will record the same program once a week, for example every Tuesday.

```
VCR PLUS+ PROG

   →ONCE
    DAILY
    WEEKLY

SELECT ▲▼ CHOOSE ►
TO END PUSH EXIT
```

Helpful Hints

- *CODE ERROR may flash on the screen after step 3 if you enter an incorrect PlusCode programming number (for example, one that is too short). The previous screen will appear. Enter the correct PlusCode programming number.*
- *If CLASH flashes on the screen after step 3, the timer recording you just programmed and another timer recording overlap. The current timer recording will not occur.*
- *If you select DAILY at step 4, ERROR may flash on the screen if the program you want to record is broadcast on a Saturday or Sunday. You must select ONCE or WEEKLY instead.*

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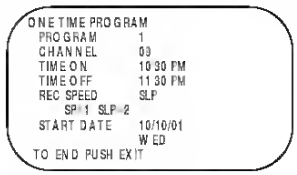
5

Press the Number 1 button to record in SP speed or the Number 2 button to record in SLP speed. Your selection will appear beside REC SPEED on the screen; SP=1 SLP=2 will continue to flash. For details about tape speed, see pages 36 and 60. You cannot use the SPEED button at this time.



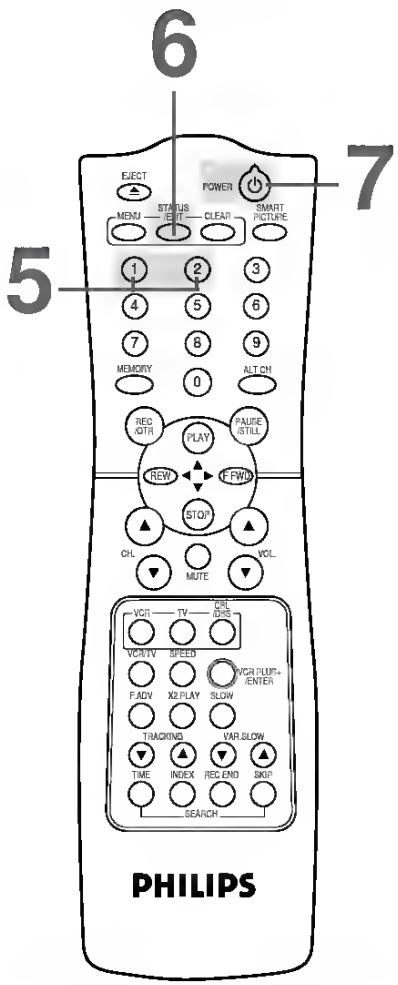
6

Press the STATUS/EXIT button. PROGRAM WAS COMPLETED/PLEASE TURN OFF VCR FOR TIMER RECORDING should appear on the screen briefly.

7

Press the POWER button to turn off the VCR power. The Timer light will appear. The Timer light will flash if there is not a tape in the VCR.

If the timer recording will take place several hours or days from now, you may use the VCR until time for the recording. Just turn off the VCR a few minutes before the recording starts. If you forget to turn off the VCR, PLEASE TURN OFF VCR FOR TIMER RECORDING flashes on your TV screen two minutes before a timer recording starts. Remove the message by pressing the CLEAR button.



Turn off the VCR for the recording. Insert a tape into the VCR. Leave the Cable Box/DBS on (if applicable).

Helpful Hints

- *To stop a started timer recording, press the STOP/EJECT button on the front of the VCR.*
- *If you are using a Cable Box/DBS, timer recordings are programmed differently. See pages eight and 38-39 for details.*
- *You may use the VCR Plus+ Programming System to record programs on Cable TV channels up to channel 125.*
- *A power failure may cause the VCR to lose CABLE/TV channel numbers. In this case, repeat steps 2-7 on page 39.*

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42 Auto DBS RecordLink

If you connect your VCR to a satellite tuner that has the Electronic Program Guide, the VCR will turn itself on, record, then turn itself off. First, read the owner's manual of your satellite tuner; then, follow the steps below. Before you begin:

- Use audio and video cables to connect the VCR's AUDIO/VIDEO IN jacks on the back of the VCR to the satellite tuner's AUDIO/VIDEO OUT jacks.
- Press the SPEED button to select the desired recording tape speed (SP or SLP).
- Set the clock. *Details are on pages 16-19.*
- Put a tape in the VCR. Make sure the tape's record tab is intact and the tape is long enough to record the program(s).

1

Set the program to be recorded on the satellite tuner. Turn off the satellite tuner. See your satellite tuner owner's manual for details.

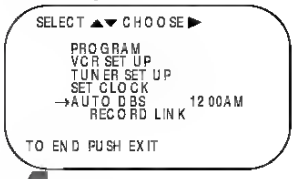
2

Press the VCR button, then press the MENU button.

3

Press the PLAY/▲ button or the STOP/▼ button to select AUTO DBS RECORD LINK. Then, press the F.FWD/► button. The current time appears next to AUTO DBS.

- **If you want the VCR to begin recording immediately, (or as soon as the program is received from the satellite tuner) press the F.FWD/► button again, then go to step 5.**
- **If you want to tell the VCR the time to start recording, go to step 4.**



4

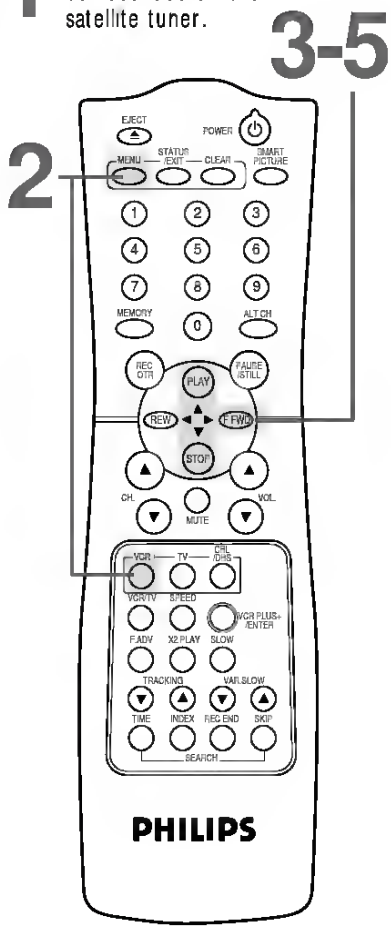
First, press the PLAY/▲ button or the STOP/▼ button until the desired hour (AM or PM) appears. Then, press the F.FWD/► button. Next, press the PLAY/▲ button or the STOP/▼ button until the desired minute appears.

5

Press the F.FWD/► button. ON will appear briefly beside AUTO DBS, then a "FOLLOW THE STEPS..." message will appear. This message is a reminder to set the program on the satellite tuner (step 1 on this page) and to connect the VCR to the tuner (as described at the top of this page).

After 30 seconds, the VCR will turn itself off and the Timer light will appear on the VCR display panel. The recording will begin either immediately or at the time you set in step 4. The VCR will stop recording when the program ends as set at your satellite tuner.

1 Set the program to be recorded on the satellite tuner.



Helpful Hints

- *You cannot use the AUDIO/VIDEO In jacks on the front of the VCR for an Auto DBS RecordLink.*
- *To stop an Auto DBS RecordLink recording that is in progress, press the STOP/EJECT button on the VCR.*
- *If a program has copy guard protection, it may not record clearly.*
- *When you use this feature, the first few seconds of a program may not be recorded.*
- *If your satellite tuner synchronizes the recording start time with the broadcasting start time, refer to the tuner's owner's manual.*
- *Turning on the VCR power will cancel the Auto DBS RecordLink.*

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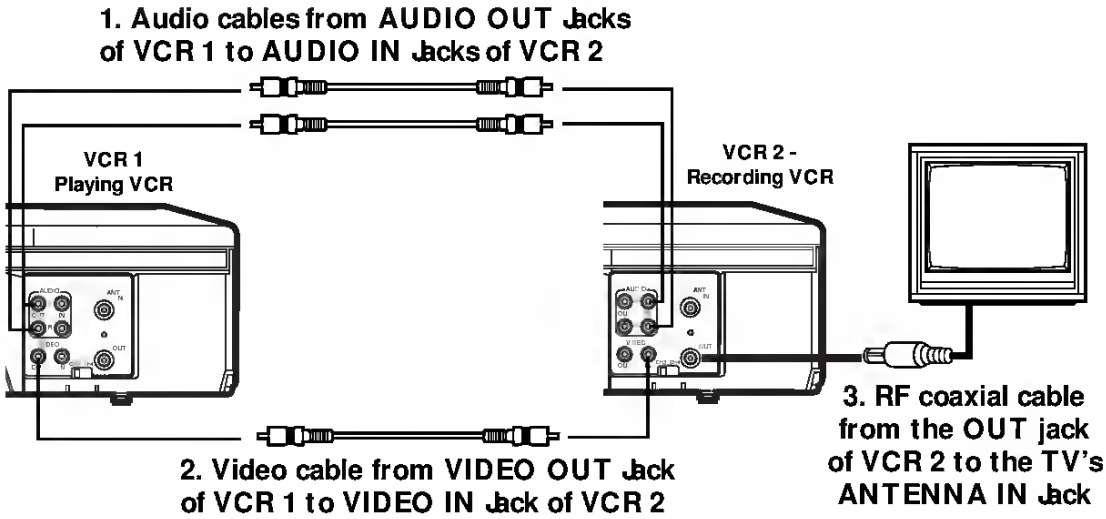
1. Audio cables from AUDIO OUT Jacks of VCR 1 to AUDIO IN Jacks of VCR 2
VCR 1
Playing VCR
VCR 2 -
Recording VCR
3. RF coaxial cable from the OUT jack of VCR 2 to the TV's ANTENNA IN Jack
2. Video cable from VIDEO OUT Jack of VCR 1 to VIDEO IN Jack of VCR 2

● Audio and Video cables are not supplied.

1

Make the connections shown above.

2

VCR 1 will play your tape. **Put a prerecorded tape in VCR 1.**

3

VCR 2 will record your tape. **Insert a blank tape in VCR 2.** The VCR must be in VCR position. (The VCR light will appear on the display panel. If it does not, press the VCR/TV button once.)

4

Turn on the TV and set it to channel 03 or 04 – the channel to which the CH3/CH4 switch on VCR 2 is set.

5

Point the remote control at VCR 2. Press Number buttons 0, 0, 1 or 0, 0, 2. *(See Helpful Hints at right.)*

6

Use the SPEED button to select SP or SLP at VCR 2.

7

Press the PLAY button on VCR 1 and the RECORD button on VCR 2 at the same time.

To stop recording, press the STOP/EJECT button on VCR 1, then press the STOP/EJECT button on VCR 2.

Helpful Hints

- *If you use the AUDIO and VIDEO IN Jacks on the back of VCR 2, press Number buttons 0, 0, 1 at step 5. AV REAR will appear on the TV screen.*
- *If you use the AUDIO and VIDEO In Jacks on the front of VCR 2, press Number buttons 0, 0, 2 at step 5. AV FRONT will appear on the TV screen.*
- *Unauthorized recording of copyrighted television programs, video tapes, or other materials may infringe on the rights of copyright owners and violate copyright laws.*
- *If a program has copyright protection, it may not record clearly.*
- *These instructions show you how to copy tapes using two VCRs like yours. Different VCRs may operate differently.*

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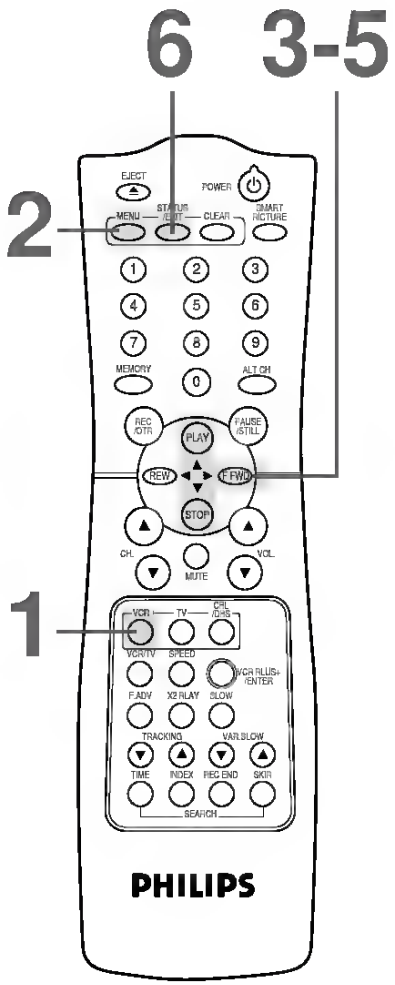
44 Repeat Play

Follow these steps to make the VCR play a tape over and over.



1

Press the VCR button.

2

Press the MENU button.

```
SELECT ▲▼ CHOOSE ►
  →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS        OFF
      RECORD LINK

TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select VCR SET UP, then press the F.FWD/► button.

```
SELECT ▲▼ CHOOSE ►
  →REPEAT PLAY        OFF
    ON SCREEN MODE
    AUDIO OUT
    LANGUAGE
    VCR PLUS+ REF. MAP
    BLUE BACKGROUND   ON


TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select REPEAT PLAY.

5

Press the F.FWD/► button so that ON appears beside REPEAT PLAY.

```
SELECT ▲▼ CHOOSE ►
  →REPEAT PLAY        ON
    ON SCREEN MODE
    AUDIO OUT
    LANGUAGE
    VCR PLUS+ REF. MAP
    BLUE BACKGROUND   ON


TO END PUSH EXIT
```

6

Press the STATUS/EXIT button. Now, when a tape has finished playing, the VCR will rewind it and start playback again.

Helpful Hints

- *To cancel Repeat Play, follow steps 1-4 above. At step 5, press the F.FWD/► button so that OFF appears beside REPEAT PLAY. Press the STATUS/EXIT button.*
- *The real-time counter memory does not function during Repeat Play.*

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The following playback features will always operate.

Automatic Playback

When you put a tape in the VCR, the power will come on automatically. If the tape's record tab is missing, playback will begin. If you have set a timer recording, the power will not come on automatically when you insert a tape with the record tab intact. If you have set a timer recording and the VCR power is off, the VCR will eject the tape if the record tab is missing.

Automatic Rewind, Eject, Off

When you play, fast forward, or record a tape to its end, the VCR will rewind the tape, stop, eject the tape, and turn itself off. If the real-time counter memory is set, the VCR will only rewind the tape to the point at which you set the counter to zero, then stop. The VCR will not eject the tape automatically or shut itself off.

Tape Eject

You can eject a tape with the VCR power on or off, but the VCR power cord must be plugged in. If you have set a timer recording, you can eject a tape only if the VCR power is on. Make sure you insert a tape and turn off the VCR power for the timer recording.

Automatic Tracking Adjustment

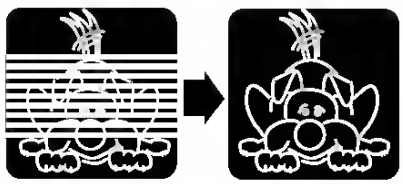
The VCR adjusts tracking automatically to give you the best possible picture quality. With some recordings, however, you may get a better picture using the manual tracking controls (see below).

Manual Tracking

To manually adjust the tracking during playback and slow motion playback, press the CHANNEL ▲/▼ buttons on the front of the VCR or the TRACKING ▲/▼ buttons on the remote control. Tracking will return to Automatic Tracking Adjustment when you press the STOP/▼ button, insert a tape, or press the PLAY button on the front of the VCR.

To remove vertical jitter in a Still picture, press the CHANNEL ▲/▼ buttons on the VCR or the TRACKING ▲/▼ buttons on the remote control.

Before Tracking Adjustment



After Tracking Adjustment

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Forward and Reverse Searching (SP/LP/SLP)

1

During tape playback, press and release the F.FW D/► button or the REW (ind)/◄ button. A fast forward or reverse picture search will begin.

2

To return to playback, press the PLAY/▲ button.

Super High Speed Searching (LP/SLP)

1

During tape playback, press the F.FW D/► button or the REW (ind)/◄ button, then press again. The VCR will now search in super high speed. Press the F.FW D/► button or the REW (ind)/◄ button repeatedly to switch between regular searching and super high speed searching.

2

To return to normal playback, press the PLAY/▲ button.

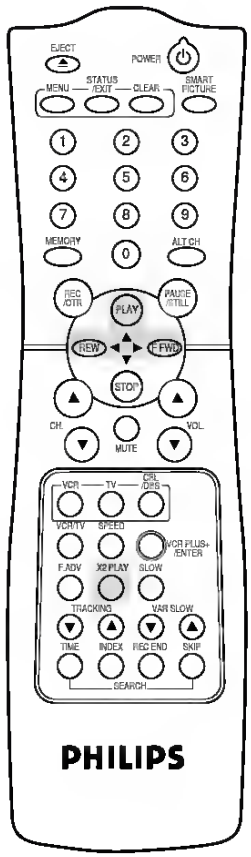
Playing a Tape at Double Speed

1

During tape playback press the X2 PLAY button. The picture will play at twice the normal playback speed. The sound will be mute.

2

To return to normal playback, press the X2 PLAY button again or press the PLAY/▲ button.



Helpful Hints

- *SP/LP/SLP means this feature will work with tapes recorded in Standard Play, Long Play, or Super Long Play.*
- *LP/SLP means this feature will work with tapes recorded in Long Play or Super Long Play. For details about tape speed, see pages 36 and 60.*

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Viewing a Still Picture

1

During tape playback, press the PAUSE/STILL button. A still picture will appear on the screen.

2

To advance the still picture frame-by-frame, press the F(rame). ADV(ance) button.

3

To release the still picture and return to playback, press the PLAY/▲ button or press the PAUSE/STILL button again.

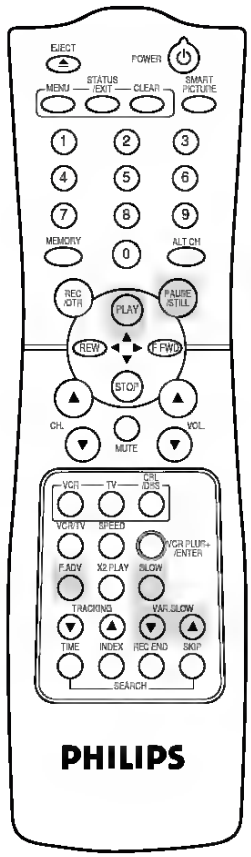
Viewing a Slow Motion Picture

1

During tape playback, press the SLOW button. The tape will play in slow motion.
NOTE: You can control the speed of slow motion playback by pressing the VAR(iable). SLOW buttons.

2

To release slow motion playback and return to normal playback, press the PLAY/▲ button or press the SLOW button again.



Helpful Hint

- *Slow and Still modes will automatically switch to Stop mode after five minutes to protect the VCR and the tape from damage*

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48 Child Lock

Child Lock prevents use of the VCR by deactivating the VCR feature buttons on the VCR and the remote control. To set the Child Lock, turn on the VCR power, then follow these steps.

1

Press the VCR button.

2

Press the POWER button to turn on the VCR power, if necessary.

3

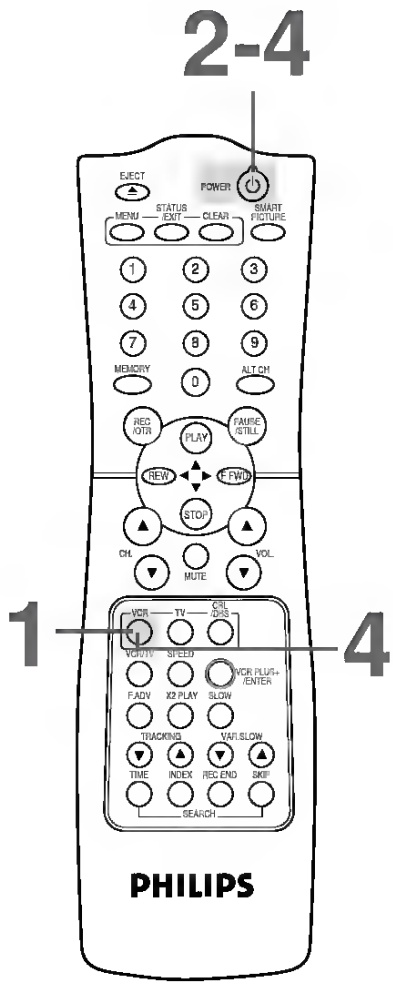
Press and hold the POWER button on the remote control until CL appears on the VCR display panel (about 10 seconds). The VCR power will turn off.

When Child Lock is activated:

- The time or CL will appear alternately on the display panel every two seconds.
- You may insert a tape. However, the VCR power will remain off and tape playback will not begin.
- You may eject the tape (unless a timer recording is programmed or has finished recording).
- Timer recordings will occur as scheduled. CL will appear steadily on the display panel during the timer recording.
- The TV and Cable Box/DBS feature buttons of the remote control will still operate.

4

To cancel the Child Lock, press the VCR button, then press and hold the POWER button on the remote control until the VCR power turns on (approximately 10 seconds).



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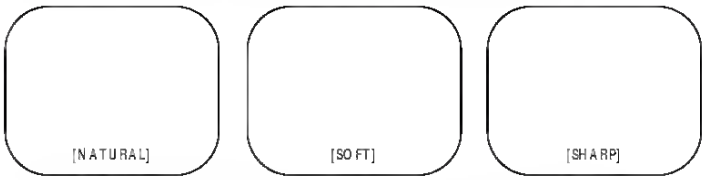
The Smart Picture feature allows you to improve the picture quality during normal tape playback.

1

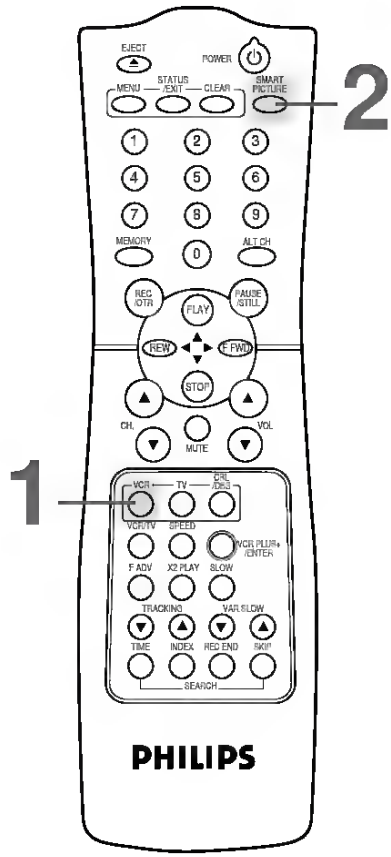
Press the VCR button during tape playback.

2

Press the SMART PICTURE button repeatedly until your desired picture mode appears on the screen.



Your selection will remain on the screen for about five seconds, then disappear.



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50 Time Search

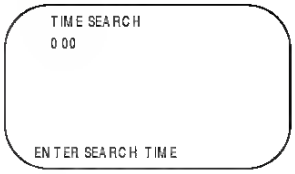
Follow these steps to program the VCR to search forward or backward on a tape a specific length of time. There must be a tape in the VCR.

1

Press the VCR button.

2

Press the TIME SEARCH button.

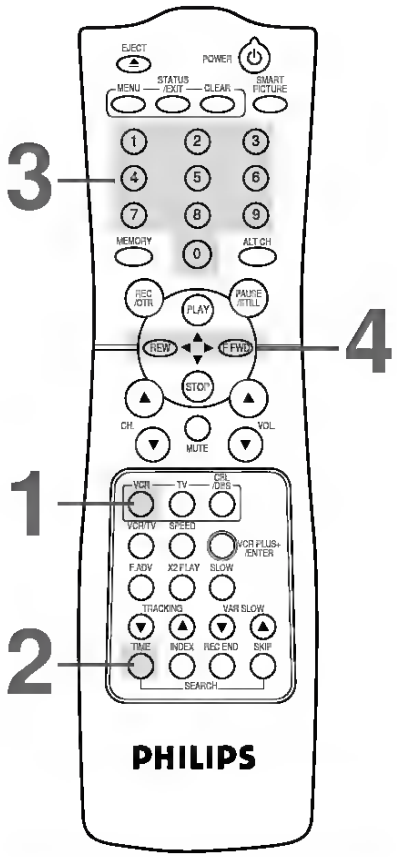


3

Within 10 seconds, use the Number buttons to enter the desired length of time you want to skip forward or backward. For example, for 1 hour, 25 minutes, press Number buttons 1, 2, 5. Or, for five minutes, press Number buttons 0, 0, 5.

4

Within 10 seconds, press the F.FWD/► button or the REW (ind)/◄ button. The VCR will skip over the specified length of time, then begin playback.



Helpful Hints

- If you want to search for more than 59 minutes, you must enter the length of time in hours and minutes For example, to search forward 70 minutes, press 1,1,0 at step 3.
- You can not do a Time Search while recording.
- To remove the Time Search display, press the TIME SEARCH button again.
- To cancel a Time Search that is in progress, press the STOP/▼ button.
- If the end of the tape is reached during a Time Search, the VCR will cancel the search and rewind the tape. Details are on page 45.

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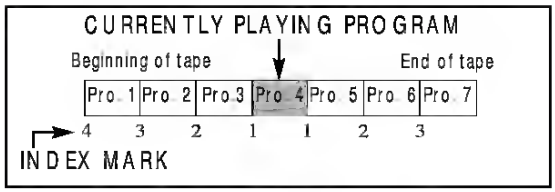
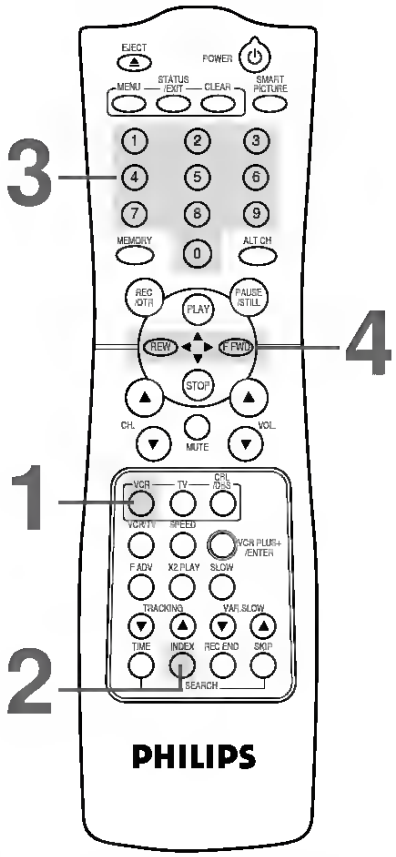
The VCR automatically indexes each recording you make. Index Search allows you to easily rewind or fast forward to the beginning of your recordings.

Example:

If you are watching program number 4 and you want to fast forward to program number 7, skip three programs.



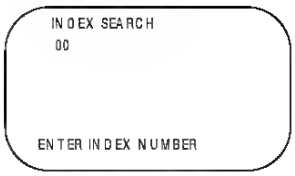


1

Press the VCR button.

2

Press the INDEX SEARCH button



3

Within 10 seconds, use the Number buttons to enter the number of programs you want to skip. For example, to skip three programs, press Number buttons 0, 3. If you do not make an entry within 10 seconds, the VCR will exit Index Search mode.

4

Within 10 seconds, press the F.FWD/► button or the REW (ind)/◄ button to skip forward or backward. The VCR will fast forward or rewind the tape to the beginning of the desired program, then begin playback. (The program numbers count down on the TV screen as the searching progresses. To remove the on-screen counter, press the INDEX SEARCH button once.)

Helpful Hints

- *You may search up to 20 index marks.*
- *Index Search is not possible during recording.*
- *Press the STOP/▼ button to stop the search.*
- *The time gap between index marks should be greater than 1 minute for SP recording, 2 minutes for LP recording, and 3 minutes for SLP recording. (LP recording is not possible on this VCR.)*
- *If the VCR reaches the end of the tape during an Index Search, the VCR will cancel the search and rewind the tape. Details are on page 45*

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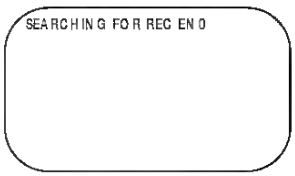
52 Record End Search/Skip Search

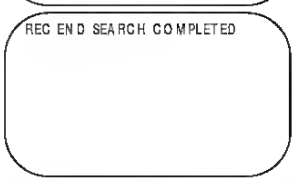
Record End Search

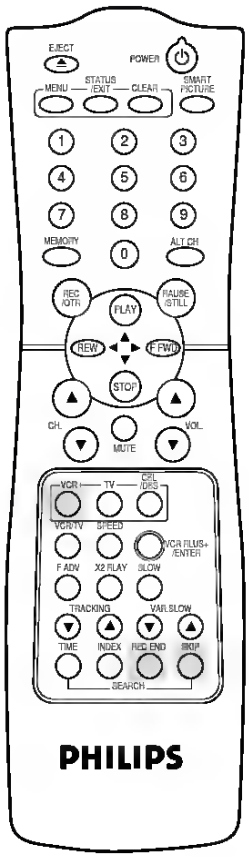
This function enables you to search forward to the next unrecorded portion of the tape (or to the point at which recording ended).

1

Press the VCR button, then press the REC(ord) END SEARCH button. The VCR begins fast forwarding to the beginning of the next blank portion of the tape. SEARCHING FOR REC END will appear on the TV screen during the search. The VCR will automatically stop when it reaches the blank portion. REC END SEARCH COMPLETED will appear on the TV screen briefly.







Skip Search

This function enables you to skip forward 30 seconds at a time during tape playback. This is helpful when you want to skip past commercials you have recorded.

1

During tape playback, press the VCR button, then press the SKIP SEARCH button. The VCR will skip forward 30 seconds, then resume normal playback. The sound is mute during a Skip Search.

Helpful Hints

- *Press the STOP/▼ button to cancel a Record End Search or a Skip Search.*
- *If the VCR reaches the end of the tape during a Skip Search, the VCR will cancel the search and rewind the tape. Details are on page 45.*

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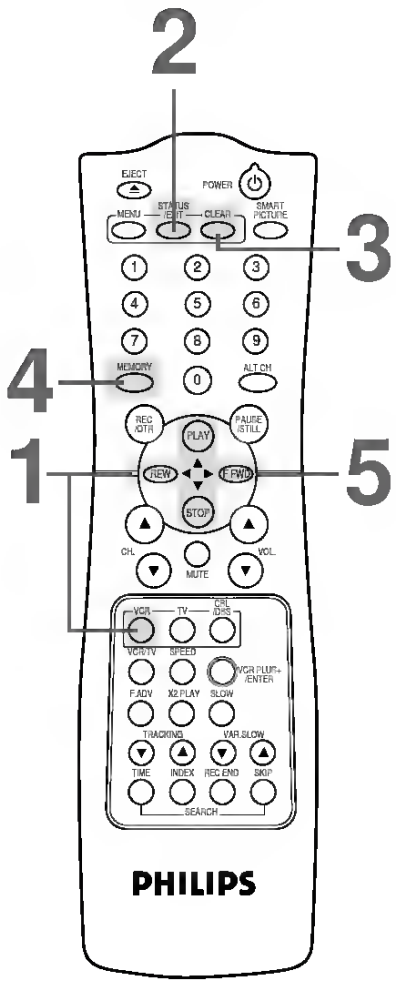
Follow these steps to reset the real-time counter to zero at a tape location you want to refer to later.

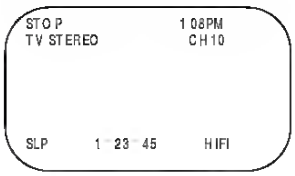


1

Press the VCR button, then play, fast forward, or rewind a tape to the location that you would like to refer to later. Press the STOP/▼ button to stop the tape.

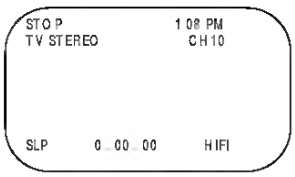
2

Press the STATUS/EXIT button to see the status display.



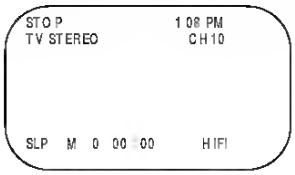
3

While the status display is on the screen, press the CLEAR button to reset the real-time counter to zero.



4

While the real-time counter is on the screen, press the MEMORY button so that M appears beside the counter.



5

To go to the tape location at which you set the real-time counter was reset to zero, press the REW (ind)/◄ button or the F.FWD/► button when playback is stopped.

When the tape reaches the point at which you set the counter to zero, the tape will stop.

Press the PLAY/▲ button to watch the tape.

Helpful Hints

- *The MEMORY button does not function if REPEAT PLAY is ON. Details are on page 44.*
- *To erase a real-time counter memory, press the MEMORY button until the M disappears from the screen.*
- *You may only set the real-time counter to zero at one location at a time. Setting the real-time counter to zero at a second location will erase the previous real-time counter to zero setting.*

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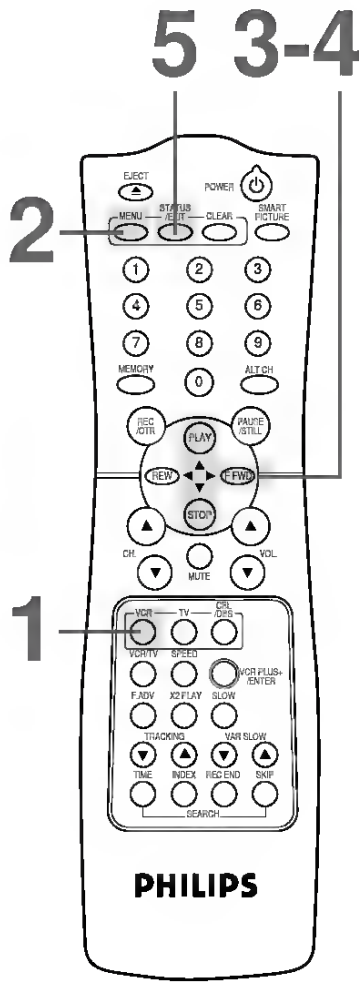
54 Blue Background

If you want the TV screen to be solid blue when a weak signal is received, set BLUE BACKGROUND to ON. The screen will be blue and the sound will be muted.
Or, if you want to receive the weak signal, set BLUE BACKGROUND to OFF. When you select a channel that is receiving a weak signal, you will see and hear the static in the TV programming. The channel number will not appear on the screen when you select a weak channel. You may not be able to access the status display or adjust the TV volume at this time.
To set BLUE BACKGROUND to ON or OFF, follow these steps.



1

Press the VCR button.

2

Press the MENU button.

```
SELECT ▲▼ CHOOSE ▶

  →PROGRAM
    VCR SET UP
    TUNER SET UP
    SET CLOCK
    AUTO DBS          OFF
      RECORD LINK

TO END PUSH EXIT
```

3

Press the PLAY/▲ button or the STOP/▼ button to select VCR SET UP, then press the F.FWD/▶ button

```
SELECT ▲▼ CHOOSE ▶
  → REPEAT PLAY       OFF
    ON SCREEN MODE
    AUDIO OUT
    LANGUAGE
    VCR PLUS+ REF. MAP
    BLUE BACKGROUND   ON


TO END PUSH EXIT
```

4

Press the PLAY/▲ button or the STOP/▼ button to select BLUE BACKGROUND. Then, press the F.FWD/▶ button repeatedly so that OFF (or ON) appears beside BLUE BACKGROUND.

```
SELECT ▲▼ CHOOSE ▶
    REPEAT PLAY       OFF
    ON SCREEN MODE
    AUDIO OUT
    LANGUAGE
    VCR PLUS+ REF. MAP
  → BLUE BACKGROUND   ON


TO END PUSH EXIT
```

5

Press the STATUS/EXIT button.

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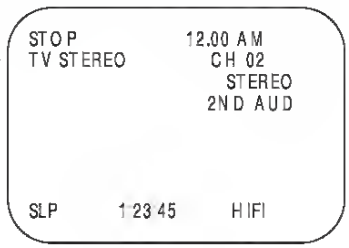
Your VCR can play Hi-Fi (high fidelity) stereo recordings, which have a crisp, clear sound from two sources. Your VCR also can play second audio tapes. Usually, that means your program is in a second language. Of course, your VCR will play tapes recorded in monaural (single-source) sound as well.
Your VCR also will record in Hi-Fi stereo or in second audio. When you play that tape on the VCR, it will be in stereo or second audio.
Read the directions on this page to familiarize yourself with your VCR's stereo and second audio setups. Then follow the directions on page 56 to record in stereo or second audio and the directions on page 57 to play Hi-Fi stereo tapes.

Understanding On-Screen Displays

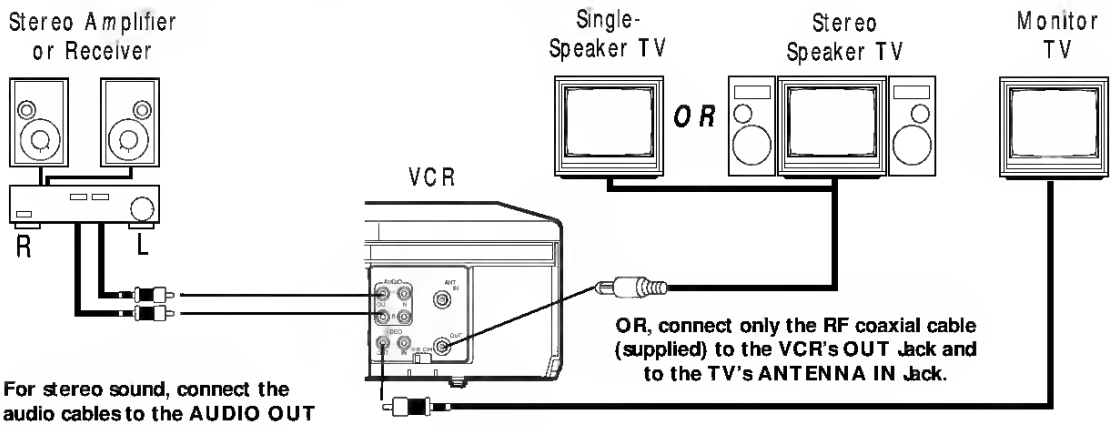
When you receive a signal from a channel you're watching, portions of the on-screen display shown below will appear when you press the STATUS/EXIT button on the remote control.

The indication 2ND AUD or TV STEREO that appears on this side of the status display tells you if your VCR is receiving a second audio or stereo broadcast. Although a program may be broadcast in both stereo and second audio, you cannot record in both stereo and second audio at the same time. Follow the steps on page 56 to program the VCR to receive a second audio or stereo broadcast.



The indication 2ND AUD or STEREO that appears on this side of the status display tells you if the program you're watching is available in second audio or stereo. This indication is not available during tape playback. Even though a program is available in second audio or stereo, you still must program the VCR to receive or record the program. Follow the directions on page 56.

To record and play programs broadcast in stereo, even if you have a Single-Speaker TV, just use one of the connections shown, then follow the steps on pages 56-57.



For stereo sound, connect the audio cables to the AUDIO OUT Jacks on the VCR and to the AUDIO IN Jacks on the Stereo Amplifier or Receiver. Then, connect the video cable to the VIDEO OUT Jack of the VCR and to the VIDEO IN Jack of a monitor TV.

OR, connect only the RF coaxial cable (supplied) to the VCR's OUT Jack and to the TV's ANTENNA IN Jack.

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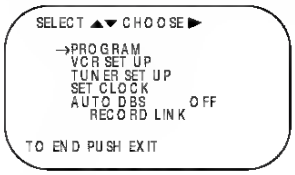
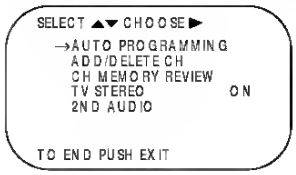
1

Press the VCR button, then press the MENU button.



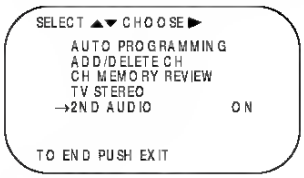
2

Press the PLAY/▲ button or the STOP/▼ button to select TUNER SET UP, then press the F.FWD/▶ button



3

Press the PLAY/▲ button or the STOP/▼ button to select TV STEREO or 2ND AUDIO. Then, press the F.FWD/▶ button. ON will appear to the right of your selection.



4

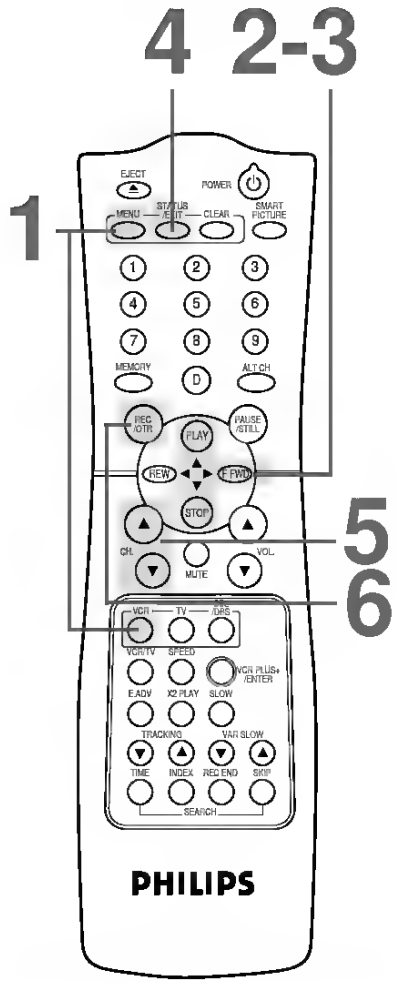
Press the STATUS/EXIT button.

5

To record, select the channel to be recorded using the CH(annel) ▲/▼ buttons, then go to step 6.

6

Press the REC(ord)/OTR button to start recording.



Helpful Hints

- *You can only receive and record in stereo or second audio programs that are broadcast in stereo or second audio. You can only play in stereo or second audio tapes that were recorded in stereo or second audio. Please see page 55 to determine if the program you want to watch/record is being broadcast in stereo or second audio.*
- *If you select second audio when second audio is not available, the VCR will record normal audio.*
- *You can not select TUNER SET UP during recording.*

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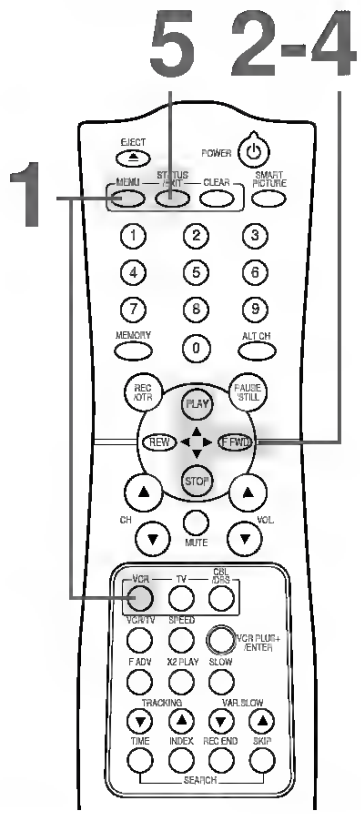
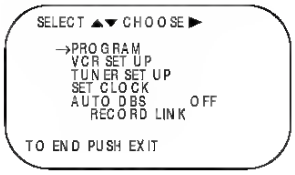
Multi-Channel Television Sound system broadcasts are automatically recorded in Hi-Fi stereo sound. To play in Hi-Fi stereo the tapes recorded in Hi-Fi stereo, however, you'll need to follow steps 1-5.



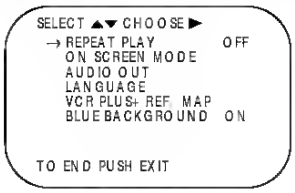
1

Press the VCR button, then press the MENU button.



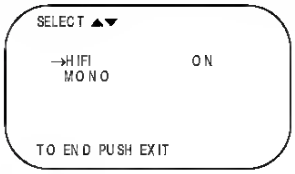
2

Press the PLAY/▲ button or the STOP/▼ button to select VCR SET UP, then press the F.FWD/► button.



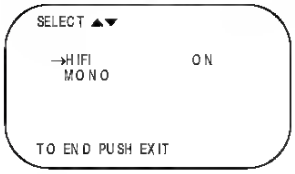
3

Press the PLAY/▲ button or the STOP/▼ button to select AUDIO OUT, then press the F.FWD/► button.



4

Press the PLAY/▲ button or the STOP/▼ button to select HIFI. ON will appear to the right of HIFI on the screen.



5

Press the STATUS/EXIT button.

Helpful Hints

- *The VCR automatically records all programs in both HIFI and MONO.*
- *The audio level of a tape recorded in HIFI will differ from the audio level of a tape recorded in MONO.*
- *Normally, select HIFI from the AUDIO OUT menu for playback with Hi-Fi sound. You can choose MONO if you want monaural audio playback. To do this, follow steps 1-3. At step 4, press the PLAY/▲ button or the STOP/▼ button to select MONO. Press the STATUS/EXIT button. HIFI will disappear from the status display.*
- *If you play non-Hi-Fi tapes while the VCR is set to HIFI, HIFI will disappear from the status display and the tape will play in monaural sound.*

Please see additional notes on page 59.

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58 Helpful Hints

If you are having problems with your product, check this list of problems and possible solutions before requesting service. You may be able to solve the problem yourself.
If you need to call a customer service representative, please know the model number and serial number of your product before you call. This information appears on the back of the product. Also, please take a moment to identify the problem you are having, and be prepared to explain this to the representative. If you believe the representative will need to help you with operations, please stay near the product. Our representatives will be happy to assist you.

No power
- Connect the power plug completely to an AC (alternating current) outlet.
- Turn on the power.

Power Failure
- With ShowGuard, the VCR will restore timer recordings when the clock is reset after a power failure. (The clock will reset itself automatically if you are using the AUTO CLOCK feature. *Details are on pages 18-19.* If you are not using the AUTO CLOCK feature, reset the clock manually. *Details are on pages 16-17.*) The timer recording will not occur only if it was to occur during the power failure.

The VCR will not record a TV program.
- Check the connections between the VCR, TV, antenna/cable, and Cable Box/Direct Broadcast System (if applicable). *Details are on pages six-10.*
- Make sure the tape has a record tab. *Details are on page five.*
- Check the TV/VCR position. *Details are on pages 24, 27, and 28.*
- Check the CH3/CH4 switch. *Details are on pages six-nine.*

The VCR will not perform a timer recording.
- Make sure the recording start and stop times are correct. *Details are on pages 34-41.*
- Make sure a tape is in the VCR and the tape has a record tab (page five). If, after programming a timer recording, you turn off the VCR power without putting a tape in the VCR, the Timer light will blink.
- If the record tab on a tape is missing, the VCR will eject the tape. The Timer light will blink.
- Make sure the VCR power is off.
- Make sure you have set the clock correctly. *Details are on pages 16-20.*
- If you have a Cable Box/Direct Broadcast System, you will program timer recordings differently. *Details are on page eight.*
- Finish programming a timer recording at least five minutes before the recording should begin.
- Noon is 12 p.m.; midnight is 12 a.m.

There is no playback picture or the playback picture is noisy or contains streaks.
- Make sure the TV is on the same channel as the CH3/CH4 switch on the back of the VCR.
- Make sure the VCR is in VCR position. (The VCR light will appear on the display panel. If it does not, press the VCR/TV button once.)
- Adjust channel 03 or 04 properly at the TV.
- Adjust the tracking. *Details are on page 45.*
- TVs that are too close to the VCR can cause interference during tape playback. Move the VCR away from the TV.

The remote control will not work the VCR.
- Press the VCR button, then try the other VCR feature buttons.
- Make sure the VCR light appears on the display panel. If it does not, press the VCR/TV button once.
- Aim the remote control directly at the VCR's remote sensor. *Details are on page 28.*
- Remove all obstacles between the remote control and the VCR.
- Inspect and/or replace the batteries in the remote control. *Details are on page five.*
- Deactivate Child Lock. *Details are on page 48.*

The VCR does not respond normally to the remote control. (For example, the VCR may change channels multiple times when you press the CH(annel) ▲ button once.)
- Install new batteries (preferably alkaline) in the remote control.

The Number buttons won't work for channels above 69.
- Enter channel numbers as a two-digit number. If you want to select channels 100 and above, enter channel numbers as a three-digit number. If you are using an antenna (not a cable signal), you may only select channels 2-69. *Details are on page 25.*

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You cannot watch TV programs normally.

- Put the VCR in TV position, then change channels at the TV. (Press the VCR/TV button so that the VCR light disappears from the display panel. *Details are on pages 24, 27, and 28.*)
- Check the connections between the VCR, TV, antenna/cable, and Cable Box/Direct Broadcast System (if applicable). *Details are on pages six-10.*

You cannot insert a tape.

- Insert the tape, window side up, with the record tab facing you.
- Make sure a tape isn't already in the VCR by pressing the STOP/EJECT button on the VCR.
- Gently push on the center of the tape when putting it into the VCR. Never force the tape into the VCR.
- If a timer recording is programmed and the VCR power is off, you can not insert a tape without a record tab.

You cannot remove a tape.

- Unplug the power cord for five minutes. Then, plug in the power cord again, then press the POWER button on the VCR. If the tape does not eject, press the STOP/EJECT button on the VCR three to five times. If the tape still does not eject, you may need to have an authorized servicer remove the tape.
- Connect the power plug to a power outlet completely.

VCR ejects the tape when you press the REC(ord)/OTR button or when you turn off the VCR power for a timer recording.

- Make sure the tape has a record tab. *Details are on page five.*

Poor reception

- You may need to tune your TV again.

The motor (cylinder) rotates even when the VCR is in Stop mode.

- To enable the quick play mechanism, the cylinder will rotate for about five minutes. This is normal. The quick play mechanism enables the tape deck to switch from Stop mode to Play mode in one second.

Line Input mode

- If you accidentally enter Line Input mode (AV FRONT or AV REAR will appear on your TV screen briefly), press the CH(annel) ▲/▼ buttons or use the Number buttons to select another channel.

Hi-Fi Stereo Sound

- During playback, Hi-Fi audio may temporarily revert to normal audio when you adjust tracking. This is normal.
- When connecting the VCR to a stereo TV, you will only get stereo sound if you use audio cables to connect the AUDIO OUT jacks on the VCR to the AUDIO IN jacks on your TV. Make sure the TV is in Line (Auxiliary) Input mode.
- When you connect the AUDIO OUT jacks on the VCR to the AUDIO IN jacks on your TV, the stereo light on the TV might not glow. But, as long as the VCR's on-screen status display indicates you are receiving a stereo signal, you are receiving a stereo signal. This is normal. *Details are on page 55.*
- Only tapes recorded in Hi-Fi audio will play in Hi-Fi audio. Tapes recorded in normal audio will play in monaural (single-source or single-channel) audio.

Cleaning the Video Heads

- Your VCR automatically cleans the video heads each time you insert a tape. However, the heads may become dirty. If so, use a commercially-available head cleaner or have an authorized servicer clean the video heads. Eventually, you may need to replace the heads.

The playback picture is too dim, too bright, or fluctuates in brightness.

- Some programs may be broadcast with copyright protection technology in order to protect the rights of copyright owners. This technology is used on programs that are recorded on video tapes or Digital Video Discs (DVDs), as well as some programs broadcast by antenna/cable/satellite television channels. Programs broadcast with copyright protection technology may not record clearly. Likewise, if you play a tape that is a recording of a copyright protected program, the picture may not be clear. Tapes of copyright protected programs may have a picture that is dark or dim, or the brightness of the picture may fluctuate. Therefore, you should avoid recording or playing copies of copyright protected programs. This VCR incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation and is intended for home and other limited viewing uses only, unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

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AUDIO IN/OUT Jacks: jacks on the front and back of the VCR that record audio from another source (IN) or send audio to another system (OUT).

Automatic Channel Setup: process in which the VCR memorizes all available channels. Then, when you press the CH(annel) ▲/▼ buttons, you only scan through channels you receive.

Bands: settings that allow you to tune channels.

- **Antenna** – VHF (very high frequency; channels 2-13) and UHF (ultra high frequency; channels 14-69).
- **Cable** – all standard channels can be received without a Cable Box/DBS.

Cable Box/DBS Output Channel: 03 or 04.

Dubbing: copying a tape using a second VCR.

Frame: a still picture.

HQ: high quality; a feature in the VCR circuitry which provides enhanced picture detail.

Line Input: The channel to which you set your VCR during dubbing. If you use the AUDIO and VIDEO In jacks on the front of the VCR, select channel 002 (AV FRONT). If you use the AUDIO and VIDEO IN jacks on the back of the VCR, select 001 (AV REAR).

If you accidentally enter Line Input mode, press the CH(annel) ▲/▼ buttons or use the Number buttons to select another channel.

OTR: One-Touch Recording; a timed recording that starts immediately and records for 30 minutes to eight hours.

Remote Control: the small electronic unit that came with your VCR; allows you to operate your VCR from a distance. You may be able to operate your TV, Cable Box, or Direct Broadcast System with the remote control.

RF coaxial cable: The black cable supplied with your VCR. Use it to connect your VCR to your TV (or Cable Box or DBS). The supplied cable is a snap-on type. However, you may use a screw-on type if you prefer.

Special Effects: forward and reverse searching; a still picture; slow motion playback.

Tape Speeds: how fast the tape travels during a recording or playback.

- **SP** (standard play) – fastest tape speed (recording time for a T120 tape is approximately two hours); best picture quality.
- **LP** (long play) – average tape speed; playback only.
- **SLP** (super long play) – slowest tape speed (recording time for a T120 tape is approximately six hours).

VCR: video cassette recorder.

VIDEO IN/OUT Jacks: jacks on the front and back of the VCR that record video from another source (IN) or send video to another system (OUT).

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Video Heads
Four heads – Hi-Fi

Video Signal
EIA standards; NTSC color

Antenna
VHF/UHF – 75 ohm external antenna terminal

VHF Output Signal
Channel 03 or 04 (switchable)
75 ohms unbalanced

Power Requirement
120V AC; 60Hz

Power Consumption
23W

Operating Temperature
41°F (5°C) to 104°F (40°C)

Relative Humidity
10% to 80%

Weight
5.3 lbs. (2.4 kg)

Dimensions
15-3/4" (W) x 3-1/16" (H) x 8-1/2" (D)
(400mm x 92mm x 216mm)

Tuner Broadcast Channels
VHF 2-13, UHF 14-69

Cable TV Channels
1 – 125

NOTE: Designs and specifications are subject to change without notice.

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62 Limited Warranty

VIDEO CASSETTE RECORDER or PLAYER

90 days Free Exchange / 91 days–One Year Reduced-Cost Exchange

WHO IS COVERED?

You must have proof of the date of purchase to exchange your product. A sales receipt or other document showing the date that you purchased the product is considered such proof.

WHAT IS COVERED?

Warranty coverage begins the day you buy your product. *For 90 days thereafter,* you may exchange the defective product for a new or renewed product at the store from which it was purchased or through Philips. Either exchange is made at no cost to you.

From 91 days to one year from the date of purchase, you must follow the exchange procedures set out on the next page. For an exchange during this warranty period you must pay $29.95 (plus your local sales tax) for a new or renewed product. This reduced-cost exchange ends one year after the date of purchase.

The replacement product is covered only for the warranty period of the original product. When the warranty on the original product expires, the warranty on all replaced products also expires.

WHAT IS EXCLUDED?

Your warranty does not cover:

- shipping charges to return defective product.
- labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna systems outside of the product.
- product repair and/or part replacement because of improper installation, abuse, neglect, misuse, accident, unauthorized repair or other cause not within the control of Philips Consumer Electronics.
- reception problems caused by signal conditions or cable or antenna systems outside the product.
- a product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- incidental or consequential damages resulting from the product. (Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This includes, but is not limited to, prerecorded material, whether copyrighted or not copyrighted.)
- damage caused by the use of non-VHS tapes or tapes that have not been tested and labeled for use in two, four, six, and eight hour VHS recorders.
- a product that is used for commercial or institutional purposes (including but not limited to rental purposes).

WHERE IS EXCHANGE AVAILABLE?

Warranty exchange is available in all countries where the product is officially distributed by Philips Consumer Electronics. In countries where Philips Consumer Electronics does not distribute the product, the local Philips service organization will attempt to exchange the product, although there may be a delay if the appropriate product is not readily available.

MAKE SURE YOU KEEP...

Please keep your sales receipt or other document showing proof of date of purchase. Attach it to the owner's manual and keep both nearby. Also keep the original box and packing material in case you need to return your product.

BEFORE EXCHANGING THE PRODUCT...

Please check your owner's manual before exchanging the product. Adjustments of the controls discussed there may save you time and money.

LIMITATION OF LIABILITY AND REMEDY...

Philips is not liable under any circumstances for any direct, indirect, special, incidental, or consequential damages, howsoever incurred, even if notified of the possibility of such damages.

To the extent permitted by local law, the remedies provided in this warranty statement are your sole and exclusive remedy.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state/province to state/province.

TO EXCHANGE YOUR PRODUCT IN THE U.S.A., PUERTO RICO, OR U.S. VIRGIN ISLANDS...

Follow the instructions stated previously in the "What is Covered" section, or refer to the exchange instructions on the next page.

In the U.S.A., Puerto Rico, and U.S. Virgin Islands, all implied warranties, including the implied warranties of non-infringement, merchantability and fitness for a particular purpose, are specifically disclaimed, and to the extent inconsistent with law of the locality of the user, limited in duration to the duration of this express warranty. Because some states do not allow limitations on how long an implied warranty may last, this limitation may not apply to you.

TO EXCHANGE A PRODUCT IN CANADA...

Please contact Philips at:

1-800-661-6162 (French Speaking)
1-800-363-7278 (English Speaking)

In Canada, this warranty is given in lieu of all other warranties. There are no other warranties, express or implied, including any implied warranties of merchantability or fitness for a particular purpose.

TO GET OUT-OF-WARRANTY EXCHANGE...

In the U.S.A., Puerto Rico, or U.S. Virgin Islands, contact Philips Service Solutions Group at 1-800-531-0039 to obtain the cost of out-of-warranty exchange.

REMEMBER...

Please record below the model and serial numbers found on the product. Also, please fill out and mail your warranty registration card promptly. It will be easier for us to notify you if necessary.

MODEL #_____

SERIAL #_____

Philips Service Solutions Group, P.O. Box 2976, Longview, Texas 75606, (903) 242-4800

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EXCHANGE INSTRUCTIONS

If your product is defective, you may be able to exchange it at the store from which it was purchased. Most stores display a Return Policy. If not, ask the manager or sales associate how many days you have to exchange a product with them. After the store's return period has expired, or if the store does not have an exchange program, you may exchange the product with Philips if you have your original sales receipt.

To exchange your product with Philips (per the warranty conditions stated previously), remember:

- If you exchange the product within 90 days of the original purchase, there is no cost to you.
- If you exchange the product more than 90 days after but less than one year after the day of original purchase, your cost will be $29.95 plus your local sales tax. If sales tax is missing or incorrect, your order will be delayed, and you will be contacted.
- After 12 months from the day of original purchase, contact Philips Service Solutions Group (PSSG) at 1-800-531-0039 for information regarding out-of-warranty exchange.
- If you do not have your original sales receipt, or if you have any questions, call PSSG at 1-800-531-0039.

To obtain a replacement product from Philips:

1. Complete the Exchange Form below.
2. Pack the product and its accessories (remote control, rf coaxial cable, owner's manual, and car battery cord, if applicable) in the original box or a suitable alternative. You will receive replacement accessories with your replacement product. For packing details, call 1-800-531-0039.
3. Put the completed Exchange Form, a copy of the original sales receipt, and the proper payment amount into an envelope. DO NOT SEND CASH. Do not staple or clip these items together. Label the envelope "Return Documents Enclosed." Place this envelope in the box with the product.
4. Seal the box with packing tape and return the product via United Parcel Service (UPS), insured and freight prepaid, to:

   Philips Recovery Center
   Rojas 6
   12420 Mercantile Avenue
   El Paso, TX 79928
   ATTENTION: VCR EXCHANGE

A replacement will be sent to you via UPS within 48 business hours of Philips' receipt of the product.

EXCHANGE FORM

Your Address (street address to which replacement should be delivered, no P.O. boxes allowed):

Name:
Street Address: Apt. #:
City: State/Province: Zip Code/Postal Code:
Phone (day): Phone (night):

Payment Amount: $29.95 **+ Sales Tax** _____ **= Total** _____

Method of Payment: (Check one. Please, no cash or CODs.)

_____	Check/Money order	Check/Money order number _____	
		Account number	Expiration date
_____	American Express	_____	_____
_____	Visa	_____	_____
_____	Novus/Discover	_____	_____
_____	Mastercard	_____	_____

Signature: _____

Detailed reason for return, use additional paper if necessary: _____

_____

Model Number _____ Serial Number _____

Remember, the return box should include the following:

- **The product,**
- **Completed Exchange Form and sales receipt,**
- **Accessories supplied with the product, and**
- **Payment, if applicable.**

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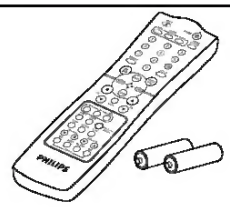
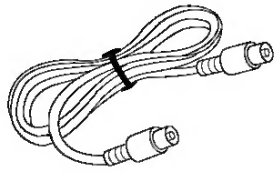
SUPPLIED ACCESSORIES

The following items are supplied with your VCR; they are provided to help you use or set up your VCR.



Remote Control 4835 218 37323
Two AA Batteries 4835 138 17012



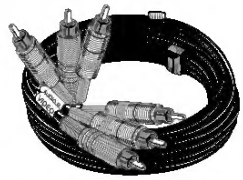
RF Coaxial Cable, 75 ohm
4835 323 27011

OPTIONAL ACCESSORIES

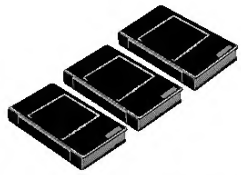
The following additional items are not provided with your VCR, but they are designed for use with your new VCR. To order these optional accessories, contact us at:

Philips Parts & Accessories Marketing Department
401 East Old Andrew Johnson Highway
P.O. Box 555
Jefferson City, TN 37760
1-800-851-8885.

VHS Cassette Rewinder
#M61117



Stereo Audio and Video Cables (6 feet)
M61106 (gold connectors)
M61105 (color-coded connectors)



Three Cassette Storage Cases (plastic)
Fits VHS and Beta cassettes
#M61104

Six High-grade, VHS, T-120 Cassettes
#MHG1206

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Remember to recycle!

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